CLARK UNIVERSITY

ACADEMIC CATALOG
1995–1996

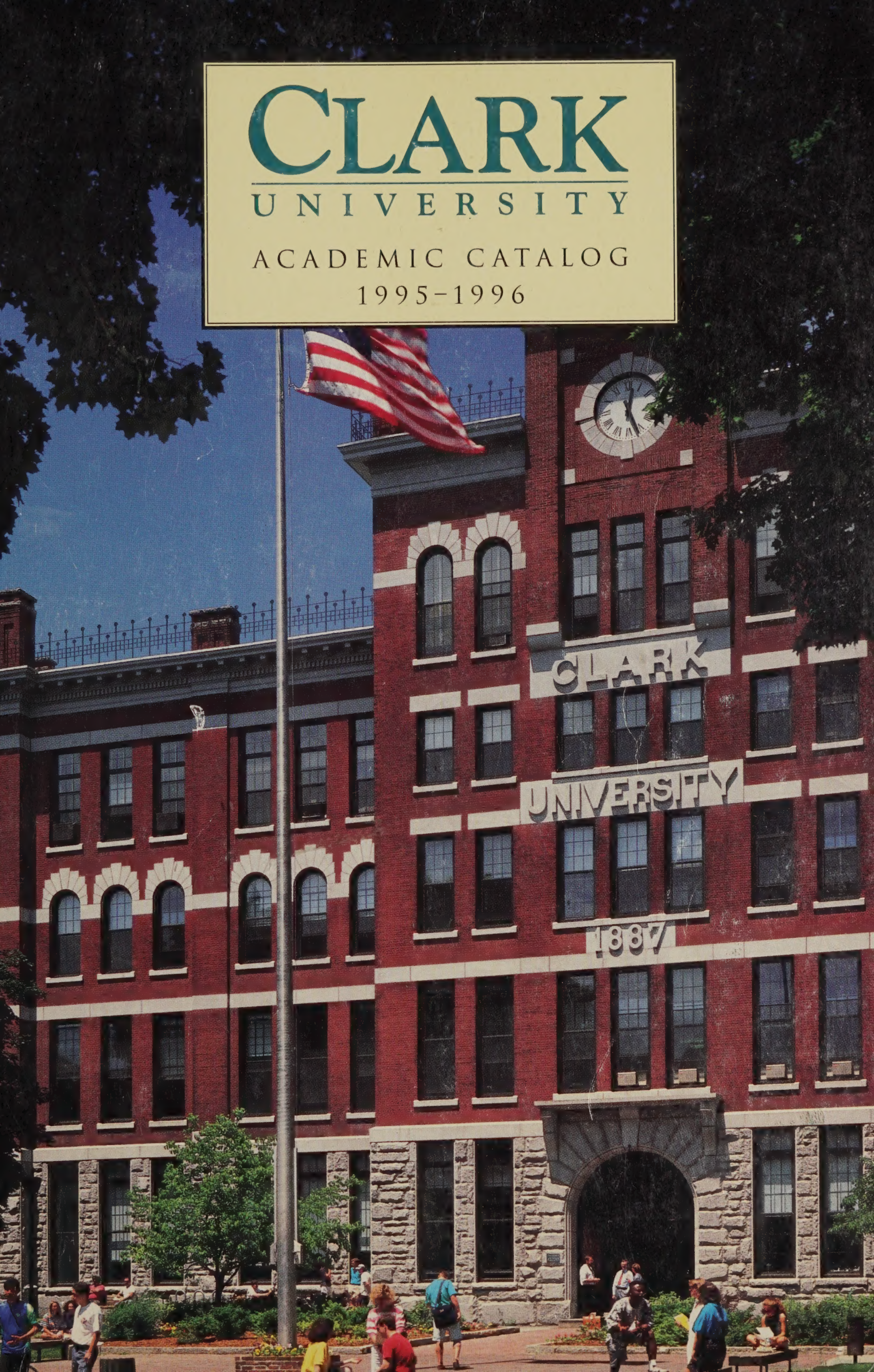

CLARK
UNIVERSITY
1887

TABLE *of* CONTENTS

This is Clark University 3
The Undergraduate College 7
Undergraduate Tuition and Financial Aid 15
Undergraduate Admission Requirements 23
Requirements for a Bachelor's Degree 29
The Graduate Program and Research Institutes 37
Living at Clark 49
Clark Athletics 55
Life After Clark 59
The Environmental School 63
Majors and Minors 69
  Ancient Civilization 69
  Biochemistry and Molecular Biology 73
  Biology 76
  Chemistry 88
  Communication, Culture and Society 96
  Comparative Literature 99
  Computer Science 103
  Economics 109
  Education 119
  Engineering 134
  English 136
  Environmental Science and Policy 152
  Foreign Languages and Literatures 167
    Classics
    French
    German
    Hebrew
    Japanese
    Russian
    Spanish
  Geography 189
    Geology 218
  Government and International Relations 219
  History 235
  International Development and Social Change 261
  Management 281
    Master of Business Administration 287
    Master of Health Administration 301
  Mathematics and Computer Science 308
  Philosophy 317
  Physics 328
  Psychology 338
  Sociology 368
  Visual and Performing Arts 375
    Art History and Criticism
    Studio Art
    Music
    Screen Studies
    Theater Arts
Concentrations 411
  Asian Studies 411
  Classics 413
  Communication Studies 416
  Cultural Identity and Global Processes 422
  Environmental Studies 426
  Ethics and Public Policy 428
  International Relations 431
  Jewish Studies 432
  Peace Studies 436
  Race and Ethnic Relations 439
  Women's Studies 442
    Ph.D. Program 444
Directory 453
Faculty 454
The Corporation 462
Academic Calendar 463

CLARK
UNIVERSITY
1887

INTRODUCTION

■ THIS IS CLARK UNIVERSITY

Academic excellence and a commitment to research are hallmarks of Clark University's century-old tradition. Clark combines the academic opportunities of a large research university with the atmosphere of a small college.

Students who come to Clark are seeking close interaction with professors who are nationally known researchers. Clark students have an opportunity rarely found at other colleges and universities to engage in research and other creative scholarship. The existence of Clark's strong graduate programs gives undergraduates seeking intellectual challenges an opportunity to accelerate to advanced studies as part of their undergraduate program.

Clark's unique bachelor's/master's programs offer motivated students the chance to earn a master's degree in five years for the same cost as a bachelor's degree. Clark offers the fifth year of the five-year, accelerated programs for free to students who maintain B plus averages. These programs are offered in biology; chemistry; communications; education; environmental science and policy; health administration; history; international development; management; and physics.

Clark is also attractive to students interested in making a difference, socially and intellectually, on their campus and in their communities. Clark students have a well-earned reputation for social awareness and activism. Clark's internationally oriented faculty, curriculum and student body help students achieve a global understanding that will be critical to professional success.

■ A REMARKABLE HISTORY

Clark University was founded in 1887 in Worcester, Mass. It is the oldest graduate institution in New England and the second oldest in the nation. Clark was founded by Jonas Gilman Clark, a Worcester-area merchant, and G. Stanley Hall, a prominent psychologist who was Clark's first president. In 1909, Clark University brought Sigmund Freud to America to lecture on psychoanalysis—the only U.S. institution to have done so. Clark's faculty has included Robert H. Goddard, the "father of the Space Age," and Albert A. Michelson, the first American to win a Nobel Prize in science.

Other researchers here first measured the windchill factor, defined chemical double bonding and made the first breakthroughs in understanding how brain tissue regenerates itself. They have developed a nuclear accident emergency plan for the Three Mile Island region, led environmental training and development programs in the Third World, and assessed changes in the earth's biosphere.

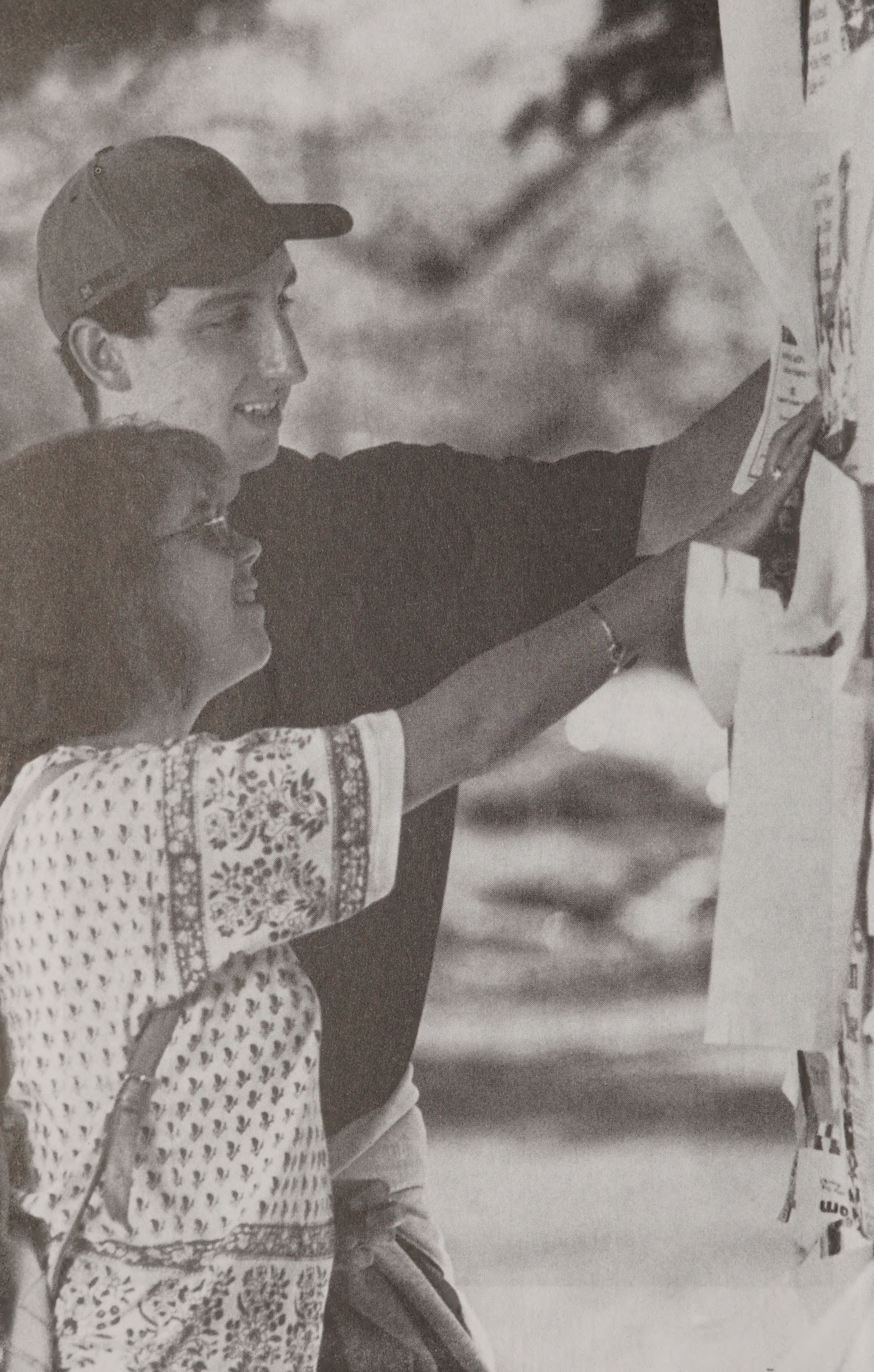
Clark University has played an especially prominent role in the development of psychology and geography as distinguished disciplines in the United States. In addition to maintaining an impressive record of research, Clark faculty have extended their influence through professional organizations and publications. For example, both the American Psychological Association and the journal Economic Geography were founded at Clark.

■ ACADEMIC OPTIONS AND OPPORTUNITIES

Clark encourages student independence within a framework of introductory and major requirements. Clark offers literally hundreds of courses, outlined under the Departments section of this publication.

The Clark faculty has developed the Program of Liberal Studies to ensure that students receive a strong, traditional liberal arts education. Within the Program of Liberal Studies, students select from a range of courses designed to foster critical thinking and to broaden perspectives. Clark is committed to giving students academic options to satisfy their intellectual curiosity as well as their professional aspirations. The Program of Liberal Studies gives students a strong foundation with which to pursue the advanced undergraduate studies for which Clark is best known.

There are 28 majors to choose from; a self-designed major can also be pursued. In addition, Clark offers 23 minors and 11 interdisciplinary concentrations, which are the heart of the advanced studies that distinguish Clark. As a small research university, Clark's strength is its ability to integrate undergraduate and graduate-level study. As juniors and seniors, Clark students can take graduate-level courses or participate in graduate-level research projects. Clark's curriculum also offers opportunities for students to study abroad and to earn credit in on-the-job internships as they test their interests in career settings.



-Shaun Folz ✓

-Kevin McKenna ✓

The UNDERGRADUATE *College*

Clark's strength is its ability to combine high-quality liberal arts education with personal attention and advanced study opportunities. Clark has developed a unique Program of Liberal Studies that provides a solid foundation for advanced study. Within the program, students choose from a range of courses designed to foster their critical thinking skills and broaden their perspectives. Because they can choose among many different courses, students can take classes that interest them and, at the same time, satisfy their broad liberal arts requirements.

In the spring of sophomore year students declare a major and begin to develop depth and expertise in a field of their choosing. The University offers 28 majors, 23 minors and 11 interdisciplinary concentrations, which can be combined to fit individual academic goals. These are at the heart of the advanced studies that distinguish Clark. Once students choose a major, their academic department becomes their intellectual "home," where they are able to work closely with faculty on research and other creative initiatives. As students acquire increasing depth and sophistication in a field, they are able to take advantage of Clark's wide array of courses to construct a program of study uniquely suited to their interests and career goals. In many fields, students have the opportunity to accelerate to an advanced degree or to enter an honors program.

■ PROGRAM OF LIBERAL STUDIES

The foundation of a Clark undergraduate education is the Program of Liberal Studies. Through the program, students acquire the intellectual habits and skills that are essential for self-directed learning. They are given a framework within which they can select a program of study and receive a broad introduction to liberal and lifelong learning. Within the Program of Liberal Studies, students have the option of choosing the "International Studies Stream," a set of courses that will prepare them to better understand global, political, cultural and economic issues.

The Program of Liberal Studies has two components:

1. Critical Thinking courses: While every course in the University involves work in critical thinking, two types of courses place special emphasis on the cultivation of these skills. Students take courses in each of these areas:

> **A. Verbal expression:** Courses that place special emphasis on the relationship between writing and critical thinking within a particular discipline.
>
> **B. Formal analysis:** Courses that place special emphasis on logical modes of thinking. These courses are found in several different departments.

All new students entering Clark are required to demonstrate basic competency in mathematics and quantitative thinking. Students may demonstrate this competency through standardized test scores or a placement test taken during orientation. Based on an assessment of those test scores, some students will be required to take IDND 017 prior to enrolling in a formal analysis course.

2. Perspectives courses: Perspectives courses offer breadth and introduce students to the different ways in which various disciplines or fields define thinking, learning, and knowing. Students must successfully complete one course in each of the following six perspectives categories, with each course taken in a different academic department.

> **A. Aesthetic:** Aesthetic perspective courses emphasize artistic expression and the perception, analysis, and evaluation of aesthetic form. These courses are designed to enhance students' appreciation and understanding of the arts.
>
> **B. Comparative:** Comparative perspective courses introduce students to comparative analysis by highlighting human diversity in politics, economics, religion, culture, class, race, gender, or ethnicity. They provide students with tools for analyzing human experience by examining similarity and uniqueness within and across societies.
>
> **C. Historical**: Historical perspective courses develop students' capacity to understand the contemporary world in the larger framework of tradition and history. Courses focus on the problems of interpreting the past and can also deal with the relationship between past and present. All courses are broad in scope and introduce students to the ways scholars think critically about the past, present, and future.
>
> **D. Language/Culture:** Language perspective courses foster the study of language as

an expression of culture. Students may study foreign languages, which highlight the relationship between language and culture, or English-language courses that deal with the same issue.

E. Natural Scientific: Scientific perspective courses teach the principal methods and results of the study of the natural world. Courses focus on the knowledge and theoretical bases of science, and also include laboratories or similar components to introduce students to the observation of natural phenomena and the nature of scientific study.

F. Values: Values perspective courses seek to make sense of the moral dimension of human life, as reflected in personal behavior, social policy, and institutional structure. Courses taught from the values perspective focus on the analysis of ethical issues and engage students in the formulation and reasoned evaluation of moral and ethical claims.

■ AN ACADEMIC CHALLENGE: THE FIRST-YEAR SEMINAR

First-year Seminars are offered by a variety of academic departments. The seminars allow students to explore particular issues and subjects in depth in their first semester. Seminars are limited to no more than fifteen students, and the seminar faculty member serves as the advisor for the students during their first two years at Clark. The seminars encourage first-year students to engage in the kind of intense intellectual experience that other colleges often reserve for junior and senior majors. See course listings for descriptions of specific first-year seminars.

■ THE MAJOR

Sometime before the end of their sophomore years, students choose a major, the area in which they will pursue a course of study in-depth. Students may choose a traditional or interdisciplinary major, or, in some cases, may design a major tailored to their particular academic interests.

While anchored in one area, the undergraduate major is structured to include courses in related disciplines. This ensures that breadth of knowledge is gained along with specialization.

A major consists of 12 to 19 courses designated by a department or program. Majors must be declared prior to the beginning of the junior year.

Majors are offered in:

ancient civilization
art (art history, studio art)
biochemistry and molecular biology
biology
business management
chemistry
communication, culture and society
comparative literature
computer science
economics
English
environmental science and policy
French
geography
German
government and international relations
history
international development and social change
mathematics
music
philosophy
physics
psychology
screen studies
student-designed
sociology
Spanish
theater arts

INTERDISCIPLINARY MAJORS

One of Clark's strengths is the eagerness of faculty and students to cross the traditional boundaries between academic fields. Interdisciplinary majors, special programs, and concentrations help students to see beyond the barriers of academic specialization. The interdisciplinary majors are:

- ancient civilization
- biochemistry and molecular biology
- communication, culture and society
- comparative literature
- environmental science and policy
- international development and social change

STUDENT-DESIGNED MAJORS

Because Clark students are encouraged to take the initiative in defining their academic objectives, their declared major need not be confined to traditional departmental majors or to the University's existing interdisciplinary programs. Some students take advantage of the opportunity to design their own majors—combining the perspectives of several fields to focus on a particular topic. Student-designed majors are coordinated by the dean of the college and developed with the guidance of faculty advisors. They must be approved by the dean of the college by the beginning of the second semester, junior year.

MINORS

Minors give students an opportunity to gain depth in an academic area in addition to their major field of study. Minors include:

- ancient civilization
- art history
- biochemistry and molecular biology
- biology
- chemistry
- computer science
- economics
- education
- English
- foreign languages (French, German, Spanish)
- geography
- government
- history
- international development
- management
- mathematics
- music
- philosophy
- physics
- screen studies
- sociology
- theatre arts

CONCENTRATIONS

Concentrations allow students to cross traditional academic disciplines to add broader perspective to the subjects in which they major. Areas of concentration include:

- Asian studies
- classics
- communication studies
- cultural identity and global processes
- environmental studies
- ethics and public policy
- international relations
- Jewish studies
- peace studies
- race and ethnic relations
- women's studies

ACCELERATED DEGREE PROGRAMS

Clark offers several programs that allow students to complete requirements for bachelor's and master's degrees at an accelerated, five-year pace. Students who pursue a four-year bachelor's degree at Clark are eligible for a fifth year of their education free to obtain a master of arts (MA), master of business administration (MBA), master of health administration (MHA), or master of science in professsional communication degree (MSPC).

Essentially, the program allows eligible students—those who maintain at least a 3.25 grade point average—to earn both a bachelor's and a master's degree for the price of a bachelor's degree. Students are accepted into master's degree programs in their junior years, begin meeting requirements in their senior years, and fulfill those requirements in the fifth year. Bachelor's degrees are granted en route to the master's degree.

The University has approved accelerated programs in biology; chemistry; communications; education; environmental science and policy; health administration; history; international development; management; and physics.

For further information and application procedures, contact Joan McDonald, Director of Accelerated Programs at (508) 793-7193.

■ PREPROFESSIONAL PROGRAMS

Clark University recognizes preparation for a professional career as fully compatible with a liberal arts education. Clark offers preparation for careers in management, computer science, education, engineering, law, medicine, and other health sciences. The Prelaw Program is administered through the Office of Career Services in conjunction with a faculty advisory committee. Premedical or predental students are advised through a special Premedical and Predental Advisory Committee.

■ INTERNSHIPS

Qualified students are offered the opportunity to spend a semester working off campus, full- or part-time, as part of their educational program. Academic credit is offered for internships that take place under the supervision of qualified agency sponsors and in conjunction with appropriate Clark faculty. Clark participates in the Washington Semester Program of the American University in Washington, D.C., and the Washington Center for Internships and Academic Seminars. Under these programs, students spend a semester studying and/or working in the nation's capital.

■ OFFICE OF STUDY ABROAD PROGRAMS

Clark University is well known for its international character and is committed to encouraging a strong Clark presence abroad and an international presence on campus. The Office of Study Abroad Program coordinates international study programs. Clark has programs in the following countries: Great Britain; France; Germany; Israel; Japan and Spain. Clark also has affiliated programs through the School of Field Studies in Kenya, the Caribbean, Australia, Mexico, Costa Rica, Palau, and Canada.

The Clark European Center in Luxembourg offers students and faculty additional opportunities for study and research abroad. A special feature of the program is the May Term, which follows the spring semester. Clark faculty take groups of students to Luxembourg on a four-week academic program especially suited for Luxembourg and its environment.

Students who study abroad on a Clark program pay regular tuition, room, and board to Clark. Clark assumes responsibility for the students' academic programs and normal living expenses for the academic year. Students may earn up to a full year of credit through study abroad. Students interested in study abroad should consult the Office of Study Abroad Programs at 22 Downing Street or call (508) 793-7363 for more information.

OFFICE OF INTERNATIONAL STUDENTS AND SCHOLARS

The Office of International Students and Scholars serves over 600 international undergraduate, graduate and intensive English students, as well as research scholars and post-doctoral fellows. The Office assists students in matters revolving around Immigration and Naturalization Service regulations as well as personal and practical matters related to daily life in the United States, including pre-arrival material, orientation sessions, immigration documents, and employment authorization materials. In conjunction with the International Student Association, OISS also provides a variety of social and educational programs to enhance the students' time at Clark. With the assistance of the International Center of Worcester, the OISS links new students with families in the community to assist students in their adjustment to Worcester and the United States.

ARMY AND AIR FORCE ROTC

Clark University students may participate in Army and Air Force Reserve Officers' Training Corps at Worcester Polytechnic Institute.

United States citizens who are physically qualified, receive their degree from Clark University, and satisfactorily complete the ROTC program will be commissioned as second lieutenants in the U.S. Army or Air Force. Students may request an educational delay of active duty to attend graduate school. First-year and sophomore students can compete for two- and three-year scholarships. The scholarships are primarily based on academic performance and academic major. Students interested in Army ROTC should contact the Military Service Department at WPI. Students interested in Air Force ROTC should contact the Department of Aerospace Studies at WPI.

3/2 ENGINEERING PROGRAMS

The 3/2 engineering program is an undergraduate program involving three years at Clark University followed by two years at an affiliated engineering school. Currently we have agreements with Columbia University, Washington University, and the Worcester Polytechnic Institute. The program leads to a bachelor of arts degree from Clark after four years and, after the fifth year, a bachelor of science in engineering from the engineering school.

ACADEMIC ADVISING

The Academic Advising Center helps students plan their academic programs through a coordinated set of activities and services. All new students are assigned an academic advisor who helps them in selecting courses and programs. Once a student has chosen a major, academic advising is coordinated by faculty within the student's major department.

Among the Academic Advising Center's support services are:

- **The Writing Center:** Recognizing the importance of writing in all fields, Clark offers cross-disciplinary, departmental, and special Writing Center programs. Supplementing the curriculum, Clark's Writing Center provides individual tutoring and noncredit workshops for all interested students. Writing Center offerings are flexibly designed to help students at all levels achieve clear, correct, graceful writing.

- **The Special Needs Program:** This program is designed to foster functional independence for students with special learning needs. Students with documented disabilities may enroll in this program. The director and staff offer advising and study skills assistance and help students negotiate reasonable accommodations. Testing and evaluation of learning disabilities are available. An early orientation for eligible first-year students is also part of this program.

- **The Peer Tutoring Program:** Clark provides individual tutoring across a range of courses and disciplines.

- **Learning Skills Program:** Through group workshops and individual appointments, students may participate in time management, test taking, note taking, and test preparation programs to improve their study skills.

■ OTHER ACADEMIC SUPPORT SERVICES

- **Language Arts Resource Center:** The Center provides video and audio tapes as well as access to satellite broadcasts of international news and programs to assist students learning a foreign language. The center is located on the fourth floor of Goddard Library.

- **Goddard Library Public Services—Reference Desk:** Students working on research projects may receive assistance at the reference desk on the use of the extensive research resources of Clark University libraries as well as the consortium library system.

- **Office of Information Systems (OIS):** The Computing Center in Carlson Hall offers tutors by appointment to assist students in mastering Clark's computer network programming and word processing resources.

■ AMERICAN LANGUAGE AND CULTURE INSTITUTE (ALCI)

ALCI serves as a resource for international students pursuing study at the undergraduate and graduate levels. ALCI offers a series of credit and not-for-credit seminars and courses enhancing students' knowledge of and facility in the English language, as well as in the academic and cultural milieu of the United States.

■ WORCESTER CONSORTIUM FOR HIGHER EDUCATION

Clark is a member of the Worcester Consortium for Higher Education, which means that Clark students can enroll for one course each semester at Anna Maria College, Assumption College, the College of the Holy Cross, Worcester Polytechnic Institute, Worcester State College, the University of Massachusetts Medical School, Tufts University Veterinary School, Becker College, or Quinsigamond Community College.

■ CONSORTIUM GERONTOLOGY STUDIES PROGRAM

The Worcester Gerontology Studies Program is offered through the Worcester Consortium for Higher Education. Courses related to aging are available among consortium colleges, reflecting the multidisciplinary nature of gerontology. This program provides courses and internships in a coordinated curriculum leading to a Certificate in Gerontology. Career planning for participating students is organized through the Consortium Office in coordination with on-campus career services.

For further information about the Gerontology Studies Program, contact Professor Deborah Merrill, Department of Sociology, the program representative at Clark.

Undergraduate TUITION AND FINANCIAL *Aid*

SUMMARY OF TUITION & OTHER CHARGES FOR FIRST AND SECOND SEMESTER OF ACADEMIC YEAR 1995-96

Tuition	$18,700
Health Services Fee	220
Room:	2,250
Residence Hall/House double room	2,250
Residence Hall/House single room	3,350
Residence Hall/House triple room	2,250
Board	2,000
Student Activity Fee	220
Telephone (required for residence hall students)	100
Cable (optional for residence hall students)	50
Charges that apply to new students only:	
Contingency Deposit (refundable)	50
Orientation Fee	145

OTHER FEES

Clark Student Health Insurance (single*)	$589

Students will be required to enroll in the Clark Insurance Plan unless they show proof of other coverage.

* $1,325 student/dependent
$2,061 student/2 or more dependents

Application Fee (undergraduate)	40
Deposits:	
Admission Deposit	300
Residence Hall Deposit	100
Tuition Deposit (upperclass students)	300

Note: Costs are subject to change from year to year.

■ GENERAL INFORMATION

Tuition, board, residence hall charges, and certain fees are due and payable prior to the beginning of each semester. The dates for 1995-96 are: August 1, 1995 for Semester 1 and January 1, 1996 for Semester 2. Students are not permitted to register for any semester until all financial obligations have been arranged satisfactorily with the University. A Budget Payment Plan is available and is explained later in this section.

There is a late fee of $75 assessed against all accounts not paid in full by the August and January due dates. In addition, interest at the rate of 1 percent per month (12.7% APR) will be charged on all past due balances (including tuition deposit).

✓

■ PAYMENT OPTIONS

Clark offers several payment alternatives to the usual tuition payment each semester. These options may be used individually or in combination with each other to best suit the needs of Clark families.

1. Family Education Loan: Clark University is one of a few schools to offer this fixed-rate, supplemental education loan. This loan allows families to borrow up to the full cost of education at a low fixed interest rate. In addition, the loan may be secured with home equity to allow for possible tax benefits. A variable rate option is also available. Contact the Office of Financial Assistance for details.

2. Monthly Payment Plan: Clark University, in cooperation with Knight College Resource Group, makes available a flexible, interest-free payment plan. This plan allows a family to make ten equal monthly payments beginning in June. You determine the amount of the bill to be covered—all or only a portion. The $35 application fee is the only charge. Optional life and total disability insurance is available.

3. Tuition Inflation Hedge: Under this program, Clark University offers families the option of fixing the tuition rate for four years at the first-year level. To do so, families pay four years of tuition during the first year, at the current rate, avoiding any increases in tuition for the following three years. For more information and an application, please contact the assistant controller.

■ TRANSCRIPTS

Transcripts must be requested in writing from the Office of Student Records. There is no charge for unofficial transcripts. Official transcripts cost $3 each. Transcripts are not issued to students with outstanding financial obligations.

■ REFUND POLICY

Withdrawals from the University are processed in the Dean of Students Office. A student who officially withdraws in writing during the first week of any semester is allowed a refund of 80 percent on tuition; during the second week, 60 percent; during the third week, 40 percent; during the fourth week, 20 percent; after the fourth week there is no refund. The activity fee is refunded by the same formula. There is no refund on other charges, except board, when a student withdraws from the University.

When a student has left, but not withdrawn from, the University on the advice of a doctor within the first four weeks of a semester, and a decision is made later that the student must withdraw, tuition refund is made retroactive to the date of the doctor's recommendation, based on the schedule described above.

■ REFUND POLICY FOR FIRST TIME STUDENTS

Students attending Clark University for the first time, and who are recipients of federal financial assistance (including federal student and parent loans) are subject to additional refund regulations. Students are eligible for refunds of scheduled charges and are responsible for refunds to financial aid programs through 60% of the first semester of attendance. This time frame is determined from a student's first date of attendance through last date of attendance or official date of withdrawl. Refunds are determined by federal regulation; and repayments to federal financial aid programs are made first to loan programs, then to grant programs as determined by federal regulations.

■ NORMAL PROGRAM AND COURSE LOAD VARIANCE

A normal full-time academic program is eight course units per year (four course units per semester). Students may elect to vary this pattern by taking three course units during any semester. A course load of three courses per semester is a full-time course load and is billed accordingly. Juniors and seniors who have received College Board permission may choose to take five courses in a semester at no additional charge. All students must complete a minimum of seven full-time semesters to meet degree requirements. Students may enroll in two units per summer. While there is no limit to the total number of summer courses students may take, normally only four units may be counted toward graduation. Seniors in their last semester are expected to take the necessary number of units (up to five) for their degree. Full-time first-year or transfer students, in their first semester at Clark University, must enroll in a four-course program. Students re-entering the University, or returning from leaves of absence, also must enroll in a four-course program during their first semester. Nontraditional students should consult with the dean of the college.

■ ORIENTATION FEE

A fee of $145 is assessed to all new students to cover services and activities provided during orientation.

■ CONTINGENCY DEPOSIT

All new undergraduates are required to pay a $50 deposit to cover minor charges, such as unreturned library books, which may be incurred during the year. Students are billed each year for whatever charges are incurred. The balance is refunded upon completion of studies.

■ HOUSING DEPOSIT

The $400 fee submitted by first-year students to Admissions includes a $100 housing deposit. Each spring, a deposit of $100 is required of students in order to enter the room selection process. The deposit is credited towards the yearly housing fee and is non-refundable.

■ APPLICATION FEE

A fee of $40 must accompany the application for admission to the University. It is not refundable.

■ STUDENT ACTIVITY FEE

A fee of $110 per semester, levied and administered by the Student Council, is required of all matriculated undergraduates except those on a program of study abroad. The Student Council allocates funds to student organizations that provide a wide range of cultural, social, and recreational activities.

■ ADMISSION DEPOSIT

For entering students planning to live on campus, a nonrefundable admission deposit of $300 and a housing deposit of $100 are required to indicate acceptance of an offer of undergraduate admission. For students planning to live off campus, only the $300 admission deposit is required. Deposits are credited toward charges for the first semester in attendance at Clark. Deposits are forfeited if the student does not enroll for the specified semester.

■ TUITION DEPOSIT

A deposit of $300 is required of all students planning to return to the University for their sophomore, junior, or senior years. It is payable by June 1 and is credited toward charges for the fall semester; the deposit of $300 is forfeited if the student does not enroll for the specified semester.

■ IDENTIFICATION CARDS

Identification cards are issued during Orientation to all new students without charge. This card is an official college identification and is necessary for access to all campus facilities. Loss should be reported immediately to the director of the Higgins University Center. There is a $15 replacement charge for a lost I.D.

■ KEYS AND KEY SECURITY

Room keys, mailbox combinations, and residence hall entry cards are issued to students upon their arrival at Clark. Fees are charged for the replacement of keys and cards that are lost during the year, and it is mandatory to return room keys and entry cards before leaving campus at the end of the academic year.

Financial Aid

The Office of Financial Assistance provides guidance to Clark students applying for financial aid and to those interested in student employment.

■ STUDENT EMPLOYMENT

Student employment opportunities at Clark include on-campus and off-campus part-time jobs and full-time summer employment, coordinated by the Office of Financial Assistance. At the beginning of each semester, Clark students with federal work-study awards receive a listing of available on-campus jobs and may choose a job best suited to their abilities and interests. It is important to note that an offer of Federal Work Study as part of a student's financial aid package is not a gurantee of that amount, but rather a limit of potential earnings. Students receive paychecks for actual hours worked which can be used for personal expenses, books, and supplies or saved for future bill charges. The Office of Financial Assistance also maintains a list of on- and off-campus jobs available to students not receiving federal work-study awards. The average number of hours worked each week for students who receive Federal Work Study is between 10 and 12 hours.

■ GENERAL INFORMATION

Financial aid is allocated on the basis of financial need and academic performance. Special talent in music, art, and other areas, as well as leadership ability, also are considered. Aid is packaged—i.e., a combination of scholarships, grants, loans, and/or part-time employment. The Office of Financial Assistance assesses each student's financial circumstances and need through a uniform analysis of the Free Application for Federal Student Aid (FAFSA) for federal and state funds, and the Financial Aid Form (FAF), for institutional funds. When required, adjustments are made in accordance with University policies and procedures. The assessment takes into account family income and assets, age of parents, financial commitments to other dependents and members of the family, and other special circumstances.

The University expects that a student's resources for education will come first from family and his/her own savings and earnings. The University will make every effort to assist most students in obtaining the difference between the total cost and expected family resources. No student should fail to apply for admission to Clark University because of the inability of his/her family to pay total educational costs.

■ INDEPENDENT SOURCES OF AID

All applicants for financial aid are urged to pursue independent sources of financial aid. Clark cannot replace outside funds for which a student is eligible but fails to apply. Scholarships are often awarded to graduating seniors by high schools and/or private scholarship agencies in students' local communities. Additional information usually is available in guidance offices.

Applicants who are residents of Massachusetts are expected to apply for a General Scholarship. To apply, students must complete the Free Application for Federal Student Aid (FAFSA), which may be obtained from guidance counselors or financial aid offices. Residents of other states should investigate the possibility of using reciprocal state scholarships (i.e., CT, DC, MD, ME, NH, PA, RI, VT).

An important source of federal financial aid is offered in the form of Federal Pell Grants. These grants, which vary in amounts up to $2,300 per year, are available to students who demonstrate financial need according to federal methodology. All applicants for financial aid are required to apply for a Federal Pell Grant. Students may do so by listing Clark University in the College Release and Certification section of the FAFSA.

Federal Stafford Loans are now available to all students regardless of need. Students may borrow up to $2,625 the first year, $3,500 the second year, and $5,500 the third through fifth years of an undergraduate program. Students may borrow up to $8,500 per year of a graduate program. The subsidized version is limited to students who demonstrate financial need according to federal methodology. It is a variable interest rate capped at 8.25 percent. No payments are due, nor does interest accrue, until after graduation or until a student is enrolled on less than a half-time basis. It may be deferred for continued education. The unsubsidized version offers the same terms and conditions; however, interest begins to accrue during the in-school period.

Veteran's Benefits may be available for service veterans and children of deceased or disabled veterans. Eligibility can be determined by contacting the local Veterans Administration Office.

Rehabilitation Assistance may be available for students who qualify for educational benefits. Information concerning rehabilitation services can be obtained at the State Rehabilitation Office.

■ AID AWARDED BY CLARK UNIVERSITY

Clark University makes a commitment to entering students during their first year and in each subsequent year at Clark, as long as they continue to demonstrate financial need, continue to meet the standards of satisfactory academic progress, have filed all necessary application materials by the required deadlines, and have not exceeded program limitations of financial aid, and as long as federal and state funding to Clark's Office of Financial Assistance continues at the same level. Although any Clark student may apply for aid as an upperclassman, funding is guaranteed only to those students who received aid their first year at Clark and have met the above requirements.

Assistance at Clark is "packaged" in the form of scholarship, loan, grant, and/or employment from the following sources:

- **Clark University Scholarships**—a portion of the University income is reserved for this purpose, and gifts from alumni, parents, and friends provide additional scholarship funds. Eligibility for Clark Scholarships is determined under institutional methodology used in the analysis of the aid application materials.
- **Federal Supplemental Educational Opportunity Grants**—one of three campus-

based federal aid programs available to college students demonstrating exceptional financial need. Continued support of this program is contingent upon annual Congressional allocations.

- **Federal Perkins Loans**—one of three campus-based federal aid programs available to college students demonstrating exceptional financial need. Loans made under this program carry a fixed 5 percent interest rate. Payment of principal and accrual of interest is deferred until after graduation or until a student is enrolled on less than a half-time basis. The loans carry a ten-year repayment schedule with a $40 monthly minimum. Continued support of this program is contingent upon annual Congressional allocations and the repayments of previous recipients.

- **Federal Work-Study**—one of three campus-based federal student aid programs. This work program allows eligible students the opportunity to work during the school year to earn money for personal expenses, travel, books, and supplies, and over the summer to earn money towards the following school year's educational expenses.

- **Merit Scholarships**—awarded to exceptional students.

■ SATISFACTORY ACADEMIC PROGRESS

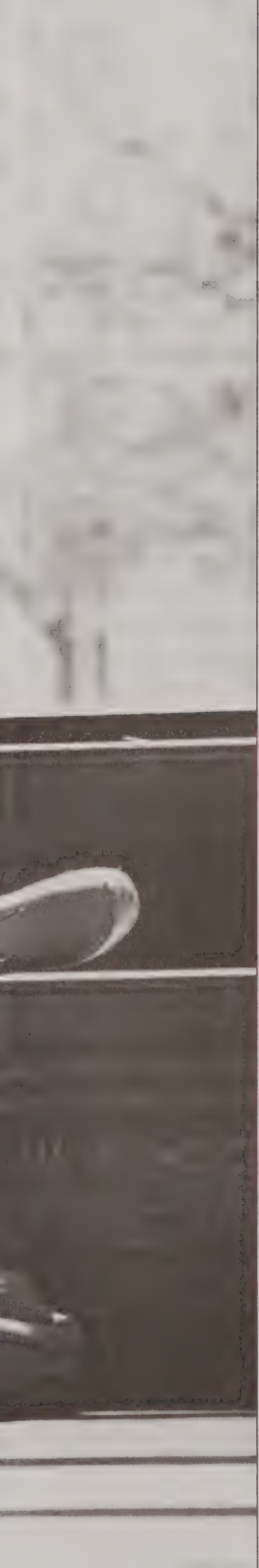
Students receiving federal financial assistance of any type (including parent loans) are required to make "Satisfactory Academic Progress" toward their degree. "Satisfactory Academic Progress" is defined by regulations of the U.S. Department of Education as "proceeding in a positive manner toward fulfilling degree requirements." This is differentiated from "Academic Standing" which refers to students whom the institution allows to continue to enroll.

Full-time bachelor's degree candidates must maintain minimum grade point averages and complete five courses the first year; six courses the second; and seven courses each year thereafter. These requirements are pro-rated for less than full-time students and students attending less than a full academic year. Evaluation of Satisfactory Academic Progress is made at the end of each Spring term.

Students who are determined not to be making Satisfactory Academic Progress are allowed one semester of continued assistance under "probation" status in order to obtain the necessary requirements for maintaining progress. If students are still not making "Progress" after one semester of "probation" status, aid is discontinued. Appeals to this policy for special and unusual circumstances may be made in writing to the Director of Financial Assistance.

■ ENDOWED SCHOLARSHIPS

Most grants awarded by the University are designated Alumni and Friends Scholarships. Funds for these scholarships are derived from named endowed funds. Because of the various restrictions placed on these funds, it is the policy of the University to select eligible recipients. Students should not apply directly.



UNDERGRADUATE ADMISSIONS

Requirements

FIRST-YEAR STUDENT ADMISSION

Clark University welcomes applications for admission from men and women regardless of race, color, sex, sexual orientation, religion, age as defined by law, handicap, national origin, or financial condition. Selection is competitive and based primarily on academic promise as indicated by secondary school performance, recommendations, and standardized test (SAT, ACT) scores. Secondarily, decisions reflect consideration of the individual experience and particular circumstances unique to each candidate.

ENTRANCE REQUIREMENTS

A secondary school diploma or G.E.D. equivalency is required for admission to Clark. Typically academic preparation should include four years of English; three years of mathematics; three years of science; two years of both a social science and a foreign language; and other credit electives, including the arts, recognized in the secondary school curriculum. The University is most concerned with the strength of the student's academic program and therefore recommends this framework of courses. However, the University values diversity and understands that some students may be following different high school curricular patterns.

■ ADMISSION TESTS

Applicants for admission in September should submit the results of the Scholastic Aptitude Test (SAT I) or the American College Test (ACT) no later than January. The SAT II Writing Test is recommended.

■ REGULAR ADMISSION

Candidates for admission in September should initiate their applications as early as possible, usually during the first semester of the final year of secondary school, and no later than February 15. The deadline for January admission is November 15. A nonrefundable application fee must accompany the application unless a waiver is requested. Clark participates in the Common Application Program and accepts photocopies of the appropriate forms, which are available in secondary schools.

■ EARLY ADMISSION

Exceptional students are invited to apply for early admission when encouraged and supported by enthusiastic recommendations from their secondary schools.

■ EARLY DECISION

As a service to students for whom Clark is clearly first choice, Clark has established an Early Decision Program. Applications in writing for an early decision must be submitted by December 1. Decisions are announced on or about January 15. Candidates will either be offered admission or will be deferred for further consideration with regular applicants. Although this program does not preclude applications to other colleges, participation by a student does require a commitment to withdraw such applications upon notice of acceptance by Clark.

■ INTERNATIONAL ADMISSIONS

Clark uses a separate international student application for admission. However, foreign students attending secondary schools within the United States may use standard application forms. The Test of English as a Foreign Language (TOEFL) is required of all candidates whose native or official language is not English. TOEFL results for successful applicants are usually in the 550-650 range. For information, write to TOEFL, P.O. Box 6151, Princeton, NJ 08541-6151. Those attending secondary school in the United States for more than two years should submit results from standardized tests (SAT, ACT). Financial aid for foreign students is limited and is based on completion of a Foreign Student Financial Aid Form. Those at secondary schools in the United States under a student visa will need another visa for university study. The Certificate of Eligibility (I-20), necessary to obtain a student visa, will be granted only after full admission and a receipt of a Certification of Finances signed by a bank official.

■ NOTIFICATION OF ADMISSION AND DEPOSITS

Regular notification of admissions decisions for September occurs on or about April 1, and Clark subscribes to the Candidates' Reply Date, May 1. For students planning to live on campus, a nonrefundable admission deposit of $300 and a housing deposit of $100 are required to indicate acceptance of an offer of undergraduate admission. For students planning to live off campus, only the $300 admission deposit is required. Deposits are credited toward charges for the first semester in attendance at Clark.

DEFERRED ADMISSION

Students who want to postpone enrollment need to submit a request in writing by the assigned reply deadline. Students who undertake academic work in the interim may not automatically defer enrollment but must reactivate their applications by submitting official transcripts for review.

ADVANCED PLACEMENT/STANDING

Placement in advanced courses is determined by individual performance on departmental examinations, which may be oral or written, or on the Advanced Placement Test of the College Entrance Examination Board. Each score of 4 or 5 on an A.P. test will be credited as one course-unit at Clark. Advanced standing may also be earned by transfer; presentation of an official transcript of college-level course work is required. A maximum of one semester's credit (4 units) may be assigned to first-year students enrolling with advanced standing.

TRANSFER APPLICANTS

Clark welcomes applications for admission with advanced standing from students attending two- and four-year institutions. The majority of students admitted enter at the

junior level, although many transfer to Clark with sophomore and advanced freshman standing. The application deadline for fall enrollment is April 15 (November 15 for spring enrollment).

■ TRANSFER REQUIREMENTS AND NOTIFICATION

All applicants for transfer are required to submit evidence of good standing, complete transcripts of all previous academic work—secondary level and beyond—including standardized test results (if taken), and any other information requested by the Admissions Committee, such as recommendations and course description catalogs. Decisions are announced as soon as possible depending upon completeness and scope of records.

■ TRANSFER CREDIT

Normally, credit is given for academic courses in the liberal arts previously taken at accredited colleges and universities and for Advanced Placement Test results as described above. No credit is given for any course completed with a grade lower than C-minus.

Evaluation of credits for college courses completed elsewhere is made at the time of admission or upon receipt of final transcripts and is used in planning a course program and in provisional classification. A maximum of 50 percent of both the Clark B.A. degree and the departmental major requirements may be accepted in transfer, and normally a minimum of two academic years at Clark is necessary for completion of degree requirements. Matriculated students should refer to the section on residency requirements.

■ CAMPUS VISITS AND INTERVIEWS

Prospective students are encouraged to visit the campus and are invited to write or call the Admissions Office (508-793-7431) for tour times and details. Interviews are not required but strongly recommended. Both on- and off-campus interviews are available by appointment with members of the admissions staff, University faculty, selected seniors or trained alumni representatives.

■ APPLICATION PROCEDURES

In addition to filing an application for admission, all first-year candidates applying for financial assistance must submit a completed Free Application for Federal Student Aid (FAFSA) by February 1 and request that an analysis be forwarded to Clark University (code 002139). These forms may be obtained from the secondary school guidance office. Offers of financial assistance will be made simultaneously with, but independent of, the decision of the Admissions Committee. Each recipient is required to verify the information reported on the FAFSA by submitting a copy of the parents' and student's most recent federal income tax form. Early decision candidates should file an Early Version aid application by December 1. This form will be sent to those who indicate on their admissions applications they will be applying for aid.

Prospective transfer students who are requesting financial aid should complete the FAFSA at the same time application is made for admission. Each transfer student must submit a signed copy of the parents' and student's latest federal income tax return to the Office of Financial Assistance and request a Financial

Aid Transcript from all colleges that the student previously attended. Award notification will be made after acceptance to the University. Applicants will not be required to post an admission deposit before receiving a financial aid decision.

Upperclass students must reapply annually for financial assistance by submitting an updated FAFSA and an Application for Financial Aid to the Office of Financial Assistance by April 1. In addition, a signed copy of the parents' and student's previous year's federal income tax return form must be submitted to the Office of Financial Assistance by the deadline. Clark financial assistance is renewed as long as the applicant meets the requirements described on page 20, under "Aid Awarded by Clark University."

■ ORIENTATION

New students are introduced to the Clark community through the Orientation program at the opening of their first semester. This program helps students plan a course of study and familiarizes them with the University and city of Worcester. Orientation facilitates academic, residential, personal, and social adjustment to university life.

REQUIREMENTS *for a* BACHELOR'S *Degree*

Course and graduation requirements: Academic credit toward the bachelor of arts degree is expressed in terms of course units. Each Clark course is awarded one unit (equivalent to four credit hours). To earn a bachelor's degree, a student must complete a minimum of 32 course units (128 credit hours) with a minimum 2.0 grade point average. He/she must receive a C- or better in at least 24 of these courses. Successful bachelor of arts degree candidates must also complete all institutional, major departmental and Program of Liberal Studies requirements for graduation. Transfer credit for students with fewer than 32 courses in residence is established by the Transfer Evaluation Committee. Students may accelerate their progress toward graduation by no more than one semester after beginning their academic program at Clark.

For the purpose of transfer, a full Clark course is equivalent to four semester hours of credit.

■ TRANSFER CREDIT

To earn a bachelor's degree at Clark, a student must earn at least one-half the total number of course units for the degree and at least one half the total number of course units taken for fulfillment of a major in a Clark program. Eight of the last sixteen units must be earned at Clark. Units earned through Clark programs off campus also meet the requirement. External credit is credit earned in the following categories:

1. Advanced placement
2. Credits transferred from other American colleges and universities
3. Credit earned in foreign study programs administered by American or foreign institutions of higher learning other than Clark.

The amount of transfer credit that can be applied to a bachelor's degree at Clark is limited by category.

1. No more than one semester (4 units) may be granted in advanced placement (A.P.). A.P. credit is defined as one unit of degree credit assigned for a score of 4 or 5 on a CEEB A.P. examination taken prior to matriculation and before the student formally enrolls. Students also may receive credit for college work completed prior to their matriculation at Clark University if that credit is in a content area deemed academically acceptable to Clark, and is from an accredited college or university. Finally, students may apply for advanced placement credit based on coursework or exams taken in international programs (e.g. International Baccalaureate, A levels, etc.).
2. Students transferring to Clark from another institution may transfer in no more than 16 units of course credit. Students who begin their coursework at Clark may subsequently transfer up to 12 units of course credit from other schools.
3. Normally, no more than one year (8 course units) may be taken in study abroad programs.

■ ACADEMIC REGULATIONS

Full-time study is defined as a three- or four-course program. Normally undergraduates carry four courses per semester. Full-time students must enroll in three or more courses per semester. Students should consult their faculty advisor, or, in some cases, the Academic Advising Center, or major departments when questions about course or program selection arise. With approval from the College Board, juniors with a minimum G.P.A. of 3.0 in their prior semester and seniors in good academic standing may enroll in a fifth course each semester at no additional cost.

While first-year students and sophomores may choose any course designated by a department as open to them, 200-level courses are normally designed for juniors and seniors. Juniors and seniors may elect any 100- or 200-level course, provided they have met all required prerequisites and have the permission of the faculty member, if necessary.

Undergraduates may be admitted to 300-level graduate courses with the approval of the instructor.

■ GRADES

Grades are an indication of individual performance in each course taken at the University. At Clark four grading options are currently in use:

1. **Graded courses:** This option uses the symbols A, B, C, D, and F with the modifying symbols "+" and "-" for A, B, and C. The lowest passing grade is D.

The faculty has approved the following qualitative description of grades:

A indicates work of distinction, of exceptionally high quality

B indicates good work, but not of distinction

C indicates average work and satisfaction of University degree requirements

D indicates marginal work

F indicates unacceptable work.

2. **The Failure Removed (FR) Grade:** Students enrolled in graded courses will receive an FR in place of their first two earned F grades. An FR will not appear on the student's transcript. After a student has received two FR grades, all subsequent F grades will appear on the transcript and become a part of the student's permanent file. An F grade also may be assigned by the College Board in cases of serious infractions of academic integrity. This F grade may not be removed.

3. **The Pass/No Record Option:** This option uses the symbols P, NR. P indicates work at a level of C- or better. Neither the P grade nor its credit is included in the calculation of the grade point average. Performance below a C- results in a No Record (NR) grade. NRs do not appear on students' transcripts. Students must choose this grade option at registration. There is no limit to the number of NR grades that a student may receive. However, NR grades do not carry credit and may not be counted toward graduation or University requirements.

4. **The Credit/No Credit Option:** This grading option, assigned by the University to a course, uses the symbols CR/NC. CR indicates work at a level of C- or better. The NC is treated like an F.

Grade point averages are calculated by the University to determine academic good standing, annual and January academic honors, Latin honors at graduation and eligibility for various honor societies. The grade point average is calculated as the average of grades earned in all Clark University graded courses. Neither external credit nor ungraded Clark University courses are included in this calculation.

■ PASS/NO RECORD OPTION

The availability of the pass/no record option is designed to help minimize the competitive aspects of grading for those who find competition detrimental to learning. Some students elect a number of their courses on this basis.

All students should remember that the majority of graduate and professional schools have expressed a preference for graded transcripts and encourage applicants to have many graded courses. Preprofessional students and those for whom graduate school is a goal should exercise caution in selecting the pass/no record option. Students who are interested in attaining honors, such as Phi Beta Kappa, May, or January honors, and Latin honors at graduation, also should exercise use of the option cautiously.

■ NONCREDIT AUDIT STATUS

With the permission of the instructor, full-time degree students are eligible to register as auditors in any course. There is no additional charge for this privilege. Part-time matriculated students also may register as auditors with the permission of the instructor and the payment of a per course fee. In limited or sectioned courses, regularly enrolled Clark students are given preference for available openings.

ARTHUR M. SACKLER
SCIENCES CENTER

Matriculated students who successfully complete audited courses (this determination is made by the instructor) also will have the audited courses posted on their permanent records.

Note: Records for nonmatriculating auditors are kept for only the semester in attendance. Transcripts are not issued for audited courses.

■ WITHDRAWAL FROM COURSES

A student may withdraw from a course at any time during the first two weeks of classes without having a W recorded on his/her transcript. Students may withdraw from a class up until the last day of classes, but any withdrawal after the second week of the semester will result in a W being recorded on the transcript. Students compelled to withdraw from a course due to exceptional circumstances (e.g. serious illness) may petition the College Board for the Withdrawal with Reason (WR) transcript notation for the course.

■ INCOMPLETES

A record of incomplete may be permitted by approval of the College Board or dean of the college only when sickness or some other unavoidable circumstance prevents completion of the course. Individual instructors may not assign incompletes without the approval of the College Board or dean of the college. A record of incomplete incurred in the first semester must be made up no later than the following April 1; if incurred in the second semester, it must be made up no later than the following October 1. If a course is not completed within the specified time, the record of incomplete is changed to F.

■ REGISTRATION

All continuing undergraduates are expected to register in November for the spring semester and again in April for the following fall semester. Details are provided in the registration class schedule each semester.

Registrations must be finalized by the end of the second week of classes each semester. Notification of the dates for registration is given, and failure to register within the announced period results in a late fee.

■ EXAMINATIONS

Final examinations are given at the end of most courses. Approximately one week is set aside for each examination period, and an attempt is made to distribute examinations for individual students evenly throughout this period. Absence from a final examination, except for the most compelling reasons, may result in a failure for the course. Comprehensive final exams are not to be given (or to be due) during the last week of class nor during the scheduled reading period. Other examinations and tests may be given at any time during the course at the convenience of the instructor.

■ CLASS ATTENDANCE

The University has no class attendance requirements; however, instructors have the prerogative of establishing such requirements for their own courses.

■ STUDENT ABSENCE DUE TO RELIGIOUS BELIEFS

According to Massachusetts state law, any student who is unable, because of his or her religious beliefs, to attend classes or to participate in any examination, study, or work requirement on a particular day, will be excused from that requirement. He/she will have an opportunity to make up any examination, study, or work requirement missed because of such absence provided makeup examination or work does not create an unreasonable burden on the school. No fees will be charged by the University for making such opportunities available. No adverse or prejudicial effects will result to any students because of their availing themselves of these provisions.

■ COURSE CHANGES

After registration is complete, a student may enter a course only with the permission of the instructor. Students may add courses up to two weeks after the beginning of classes. Thereafter, a student may enter a course only with the permission of the instructor and the College Board or the dean of the college.

CLASSIFICATION OF STUDENTS

All students who have not been required to withdraw at the end of the academic year will be promoted if they have satisfactorily completed the following number of courses:

To the sophomore class	6 units
To the junior class	14 units
To the senior class	22 units

■ PARTIAL PROGRAMS

In special circumstances, students may be permitted by the dean of students or the dean of the college to register for a semester program of fewer than three courses. These students are designated as part-time students.

■ GUEST AND SPECIAL STUDENTS

Guest students from other colleges and universities who want to study at Clark for one or two semesters and special students who want to take only a few courses without enrolling as degree candidates may do so.

Students who wish to enroll as guest students should contact the Admissions Office. Those interested in special student status should contact the Office of Student Records.

ACADEMIC STANDING

Academic standing is reviewed each semester and is based upon performance during the previous semester. All students are required to pass at least two courses each semester, and to maintain a 2.0 grade point average. In order to remain in good academic standing, first-year students must complete at least five courses with a minimum 2.0 grade point average by the conclusion of their first year. Sophomore, juniors and seniors must complete at least six courses with a minimum 2.0 grade point average for the year. In addition, students may earn no more than eight D grades for credit towards graduation. Students who fail to meet these requirements will be placed on academic probation for the next semester they are enrolled in the institution.

Students who do not maintain academic good standing or who violate academic integrity may be placed on academic probation or may be dismissed by the College Board or the dean of the college. The progress of students who are placed on academic probation is reviewed by the board at the end of the semester on probation.

Students on probation are expected to complete four courses with a 2.0 average or face a required withdrawal for the subsequent semester. A second required withdrawal requires the student to complete three courses at another institution with grades of C- or higher prior to their application for readmission to Clark. A third required withdrawal is final.

ACADEMIC INTEGRITY

Academic integrity is a basic value for all higher learning. Simply expressed, it requires that work presented must be wholly one's own and unique to that course. All direct quotations must be identified by source. Academic integrity can be violated in many ways: for example, by submitting someone else's paper as one's own; cheating on an exam; submitting one paper to more than one class; copying a computer program; altering data in an experiment; or quoting published material without proper citation of references or sources. Attempts to alter an official academic record will also be treated as violations of academic integrity.

To ensure academic integrity and safeguard students' rights, all suspected violations of academic integrity are reported to the College Board. Such reports must be carefully documented, and students accused of the infraction are notified of the charge. In the case of proven academic dishonesty, the student will receive a sanction which may include suspension or expulsion.

LEAVES OF ABSENCE

A student who is in good standing may apply to the dean of students for a leave of absence, after which he/she may return to the University without formal application for readmission.

NO SHOWS

Students who fail to enroll for two consecutive semesters without taking a formal leave of absence will be administratively dismissed from the institution. To be considered for readmission after this dismissal, students must apply to the dean of students.

■ DEPARTMENTAL HONORS

Students may be admitted to a program leading to a bachelor's degree with honors in a particular major at the beginning of the junior year or, in some cases, at the beginning of the senior year. In most cases, each student will work with a faculty member who serves as his or her honors advisor and assists with planning the honors research and thesis during the student's junior and senior years. The program may include a maximum of six courses in which the student works under the advisor's supervision. In some cases, students must pass a comprehensive examination given by the department in the senior year.

Students should check with the major department to obtain guidelines for the specific requirements for honors before the end of the sophomore year (although in some departments, applications for honors may be made in the second half of the junior year).

Admission to an honors program does not relieve students of any of the standard major requirements. A student's candidacy for honors will be terminated at the end of any term in which he/she has not maintained a standard of work satisfactory to the department. If candidacy is terminated for any reason, the amount of course credit to be allowed for honors courses will be determined by the College Board.

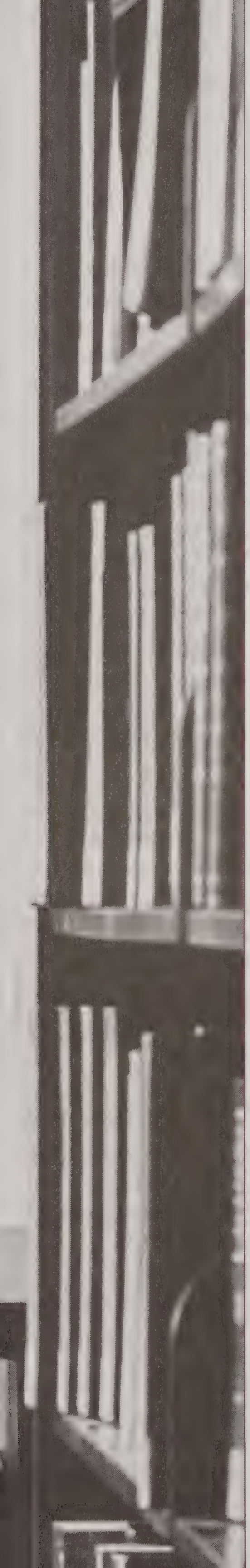
The department may recommend that a student graduate with honors, high honors, or highest honors. That recommendation is made to the dean of the college at the completion of the honors program and is announced at graduation. Consult individual departments for details concerning acceptance into their honors programs.

■ ANNUAL HONORS

Each semester, the dean of the college publishes a list of students who have distinguished themselves by outstanding academic performance in the preceding semester. Honors are awarded to the top students in each class based on semester grade averages.

Upon graduation, Latin honors are awarded at three levels: cum laude; magna cum laude, and summa cum laude. These general honors are determined criteria such as grades and percentage of courses taken on P/NR and graded basis. Ordinarily three quarters of a student's record at Clark must be graded if he/she is to be eligible for general honors.

Honor societies at Clark include the Society of Phi Beta Kappa, founded at the College of William and Mary in 1776 and dedicated to the recognition and encouragement of outstanding scholarly achievement in liberal studies. The Clark Chapter, Lambda of Massachusetts, was established in 1953. Gryphon and Pleiades is the senior honor society at Clark. Its membership includes students who have been recognized by administration, faculty, and their peers for academic achievements and leadership in campus extracurricular activities. The Fiat Lux Honor Society was created in 1988 as a student honor society recognizing combined qualities of scholarship and citizenship among Clark juniors and seniors. Qualifications for selection include a minimum 3.3 grade-point average and a significant extracurricular contribution to the Clark community.



The GRADUATE PROGRAM *and* RESEARCH *Institutes*

Founded in 1887 as the second graduate school in America (after Johns Hopkins), Clark has continued to offer outstanding master's and doctoral degree programs in the context of an intimate university. Over the years, Clark's graduate school has been at the center of major research breakthroughs in disciplines as diverse as physics, geography, and psychology.

Clark offers graduate programs leading to doctoral and master's degrees. Admission to Clark's graduate programs is open to holders of the bachelor's degree or its equivalent, and is determined on a competitive basis. All programs are administered by the Graduate Board. Completion of a master's degree program generally requires one or two years of study, and completion of the Ph.D. requires at least four years of study, although requirements vary across departments.

Doctor of philosophy degrees are offered in biology, the biomedical sciences, chemistry, economics, geography, history, physics, psychology, and women's studies. Master of arts degrees are offered in biology, chemistry, education, English, geography, history, international development, physics, psychology, and the interdisciplinary program for environmental science and policy. The master of business administration is offered by the

Graduate School of Management, and the master of health administration is offered by the Graduate School of Management in conjunction with the University of Massachusetts Medical School. The College of Professional and Continuing Education offers the master of public administration, a master of science in professional communication, and the master of arts in liberal arts.

Departments that do not, at present, accept candidates for graduate degrees may offer courses suitable for inclusion in a program of graduate study. Programs crossing departmental lines are also available through the University's individually designed Ph.D. program.

There is a wide variety of financial support available for incoming graduate students. Most departments offer teaching assistantships, fellowships, and research assistantships. Often these come with a stipend as well as tuition grants. Some specific examples of fellowship awards are listed at the end of this section.

Because of the close interaction between the Graduate and Undergraduate colleges, Clark is able to offer accelerated, five-year degree programs. In a program unique to Clark, the fifth year is offered free to students who maintain a B plus average over their four years at Clark.

■ INQUIRIES AND ADMISSION TO GRADUATE SCHOOL PROGRAMS

Inquiries from both U.S. and international students concerning specific programs of graduate and postdoctoral work should be addressed to the chair of the department or program concerned.

Admission to the Graduate School may be granted only by the dean of graduate studies and research acting for the Graduate Board on the recommendation of a department or program of the University. Formal notification is by official letter from the graduate dean. Applicants should communicate with the appropriate department or program head. The applicant will be provided with an application form, which, accompanied by a $40 application fee, should be returned to the department or program. In addition, the applicant should arrange for the forwarding of an official transcript of all undergraduate and any subsequent academic work and three letters of recommendation from persons who are competent to judge qualifications for graduate study.

Department or program heads may request the submission of additional material, and most require a record of attainment in the Graduate Record Examination given by the Educational Testing Service, Princeton, N.J. All applicants are urged to submit their scores on the Graduate Record Examination verbal, quantitative, and advanced tests. Applicants to the Graduate School of Management programs (master of business administration or master of health administration) are required to take GMAT rather than GRE examinations.

In addition to an application and $40 fee, foreign students should provide a certified English translation of official transcripts, evidence of English proficiency (TOEFL), at least three letters of recommendation, and a statement concerning their financial resources or agency support.

Application deadlines vary by department. Please contact the department or program of interest for the date.

Admission to the Graduate School is valid for a specified time only and lapses after that period. If a student is admitted while still a candidate for a degree from another institution, an updated transcript noting the conferring of that degree must be sent directly to the dean of graduate studies and research.

Part-time graduate study is possible in some departments. Admission as a special graduate student (nondegree candidate) is a simple enrollment process handled through the Office of Student Records. The grading system for these students is: A-F (with plus and minus) or Pass/Fail.

■ MASTER'S PROGRAMS

Master of Arts

Master of arts degrees are offered in the fields of biology, chemistry, education, English, geography, history, international development, physics, psychology, and the interdisciplinary program environmental science and policy.

Residency: An academic year (generally eight semester-courses) of study in residence is a minimum requirement for a master's degree. Individual departments or programs may require longer periods of residency. Residence study is broadly defined as graduate work done at Clark University under the immediate personal supervision of at least one member of the University faculty.

Foreign Language: Language or other special requirements are included in the department listings in this catalog.

Candidacy: Application for admission to candidacy for a master's degree must be filed with the dean of graduate studies and research not later than the first week of the last full semester the student expects to spend in residence as a candidate for a degree. Forms are obtainable at the Graduate School office. Applications will be considered by the Graduate Board when the student has completed one semester of full-time graduate work or its equivalent in residence at the University and obtained the written endorsement of the major department or program.

Candidacy for the degree of master of arts is valid for three years after admission to candidacy. Candidacy may be renewed once, for satisfactory reasons, for an additional period of three years on vote of the Graduate Board.

Course and Examination Requirements: Each student must complete at least eight semester-courses in a program approved by the department. One course may be a research course devoted to the preparation of the thesis. Credit for a maximum of two courses at another institution may be approved by the dean of graduate studies and research upon recommendation of the department.

Each candidate must pass written examinations required by the major department and a final oral examination by a committee of three or more, one of whom must be a representative approved by the Graduate Board.

Thesis: The thesis is written on a topic in the field of the student's special interest under the supervision of a member of the department and in a style, length, and format that is appropriate to the problem being researched. Regulations for submission of theses and degrees are available from the department and the Graduate School Office.

Graduation Fee: The fee for the master of arts degree is $100. This covers the cost of the diploma, publication of the precis in Dissertations and Theses, and binding of the library copy. It is payable when the thesis is deposited with the format advisor. Students who do not write a thesis, including those receiving the degree on the alternative program, must pay this fee no later than the date on which theses are due to the University format advisor.

Alternative Program: A candidate for the degree of master of arts may be recommended for the degree without a thesis after passing a preliminary doctoral examination.

Nonresident Students: Continuing students who are not registered for courses at Clark are required to pay a nonresident fee of $200 per semester to maintain active status. If fees are unpaid, the student will be dropped from the degree program. (Fees double upon renewal of candidacy.)

Master of Arts in Education

See program description in the Education section of this book for program requirements.

■ POST-GRADUATE PROGRAMS IN COPACE

Through the College of Professional and Continuing Education (COPACE), Clark offers Master of Arts in Liberal Arts (MALA), a Master of Public Administration (MPA), and Master of Science in Professional Communication (MSPC) degrees.

The MALA degree program is designed for students wishing to pursue liberal arts education at the graduate level. The Master of Public Administration Program is designed to strengthen and advance the managerial and analytical skills of midcareer managers and executives in public organizations and nonprofit institutions. The Master of Science in Professional Communication is a comprehensive, practical program designed for mid-career professionals. For further information, contact the College of Professional and Continuing Education.

Certificate Programs

Through COPACE, the University offers three postgraduate certificate programs: the Graduate Certificate in Gerontology, the Graduate Certificate in the Teaching of English as a Second Language, and the Graduate Certificate in Public Administration.

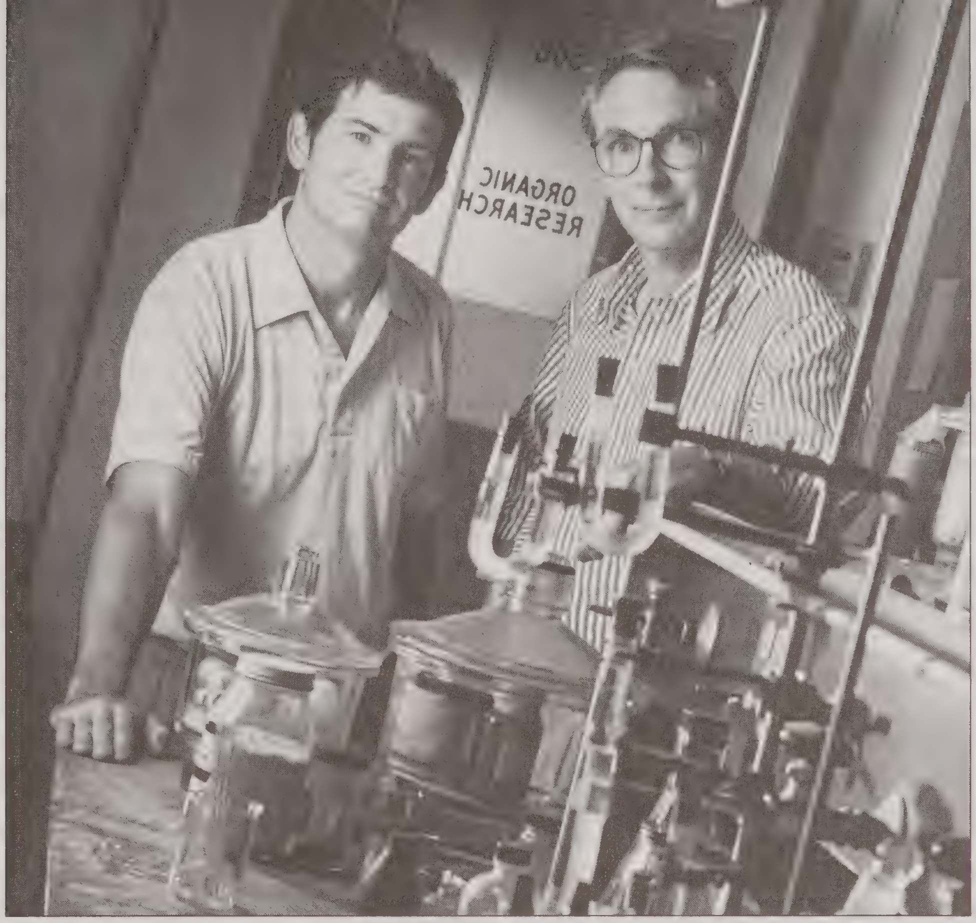
Certificate of Advanced Graduate Study (CAGS)

Through COPACE, Clark offers a Certificate of Advanced Graduate Study (CAGS) in Interdisciplinary Studies, designed for teachers, administrators, and other professionals. The program is open to those already holding a master's degree. Although increased specialization in a student's particular area is possible through the chosen concentration track, the Clark Interdisciplinary Studies CAGS, unlike traditional CAGS offered elsewhere, attempts to foster breadth beyond a discipline. Courses are chosen from several disciplines; the student's focus is interdisciplinary, incorporating and transcending established domains of study.

■ MASTER'S PROGRAMS IN THE GRADUATE SCHOOL OF MANAGEMENT

Master of Business Administration/ Master of Health Administration

The accredited Clark University Graduate School of Management offers programs lead-



ing to the master of business administration (MBA) and the master of health administration (MHA) degrees. The MHA degree is offered in conjunction with the University of Massachusetts Medical School, Worcester.

■ DOCTORAL PROGRAMS

Doctor of Philosophy

Doctor of philosophy degrees are offered in biology, biomedical sciences, chemistry, economics, geography, history, interdisciplinary Ph.D., physics, psychology, and women's studies. Doctoral students in the biomedical sciences and in psychology may also enroll in courses given cooperatively with the University of Massachusetts Medical School, the Worcester Foundation for Experimental Biology, and Worcester Polytechnic Institute.

Only well-qualified candidates with proven ability in their special fields of study will be encouraged to proceed to the degree of doctor of philosophy.

Residence: The minimum requirement is one year of full-time study (six or eight semester courses; varies with department) beyond the M.A. or its equivalent in part-time work, in residence. If the degree of master of arts has been earned at Clark, this requirement is in addition to the residence requirement for that degree.

Foreign Language: Each graduate department sets its own language or related requirements as the student's field of research may demand and must report such requirements in each case to the dean of graduate studies and research. If a language is required, either a testing service or on-campus tests are employed at the discretion of the department.

Preliminary Examination: Upon completion of preparation in the fields of study, a prospective candidate takes a preliminary examination set by the major department. This examination may be written or oral, or a combination of both. The chair of the department may invite other scholars from within or outside the University to participate in the examination.

Candidacy: An application for admission to candidacy should be filed when the applicant has: (1) completed two full academic years of graduate work or its equivalent in part-time work, including at least one year at Clark University, (2) completed the departmental requirements in a foreign language, (3) passed a preliminary examination in the chosen field of study, and (4) obtained the written endorsement of the major department. Application forms can be obtained from the Graduate School Office.

Candidacy for the degree of doctor of philosophy is valid for three years after admission to candidacy. Candidacy may be renewed once, for satisfactory reasons, for an additional period of three years by vote of the Graduate Board.

Dissertation: A dissertation, which is expected to make an original contribution to a specialized field of knowledge, is required of each candidate. The dissertation, approved by the chief instructor or dissertation committee, is presented to the examining committee at the final oral examination.

An abstract of the dissertation, not exceeding 350 words, and a precis, not exceeding 75 words, both approved by the dissertation advisors, are also required.

Four weeks before the degree is to be conferred, a presentation-quality copy of the dissertation, together with two official title pages, an academic history, an abstract and a precis, must be delivered to the University format advisor. At the same time, one or more copies of the dissertation and of the abstract may be required by the major department. The title pages, precis, and academic history forms can be obtained from the format advisor. The presentation-quality copy of the dissertation must be typed or computer-printed as prescribed in Format Regulations for Theses, Dissertations, and Research Papers and Suggestions for the Preparation of Doctoral Dissertations for Microfilming. These instructions are available from the format advisor.

The dissertation and abstract become part of the permanent collection in the University library. A microfilm copy of each dissertation is made by University Microfilms, Inc., of Ann Arbor, Michigan, and is available for duplication on request to that company. The abstract is printed in Dissertation Abstracts.

Articles published in referred journals may be accepted in lieu of a dissertation with the approval of the department and the graduate dean. Requests for approval should include statements that attest to the originality and significance of the study.

Final Examination: An oral examination is required. Additional written examinations may be required if the major department so directs. The candidate is expected to defend the dissertation and, at the discretion of the examining committee, may be questioned on the entire specialized field of study. The oral examination is conducted by a committee of at least four members, composed of at least one representative approved by the Graduate Board and members of the department and nonmembers from within or outside the University appointed by the chair. The chair notifies the dean of graduate studies and research, at least one week in advance, of the time and place of the examination and the composition of the committee. The dean is authorized to invite any person from within or outside the University to be present and to assist in the examination.

Graduation/ Diploma Fee: The fee for the doctor of philosophy degree is $150. It covers the cost of the diploma, hood, publication of the precis in the publication Dissertations and Theses, publication of the abstract in Dissertation Abstracts, and binding of the library copy of the dissertation. It is payable when the dissertation is deposited with the University format advisor.

Nonresident Students: Continuing students who are not registered for courses at Clark are required to pay a nonresident fee of $200 per semester to maintain active status. If fees are unpaid, the student will be dropped from the degree program. (Fees double upon renewal of candidacy.) For information on nonresident loan deferment status see Graduate Tuition section.

Doctor of Philosophy in Biomedical Sciences

The Biomedical Sciences Ph.D. Program began in 1975 with the recognition that certain individuals without a standard academic background, but with previous research experience and an outstanding aptitude for independent research, may benefit from a relatively unstructured program leading to the Ph.D. degree. This is a cooperative program involving Clark University, the University of Massachusetts Medical School, Worcester Foundation for Experimental Biology, and Worcester Polytechnic Institute. It utilizes the faculty, facilities, and varied research interests in the biomedically related sciences in the Worcester area. The primary criteria for admission are research ability and potential, and evaluation of applicants is based largely on evidence of their previously performed research. Award of the Ph.D. requires passing of a preliminary examination and presentation and defense of a research thesis. Competence in the major field in preparation for the preliminary examination can be achieved through independent study, directed study, or formal courses. The Ph.D. degree may be awarded by either Clark University or Worcester Polytechnic Institute, although dissertation research may be done at any of the participating institutions under the sponsorship of a faculty member from that institution. Areas for conducting of dissertation research reflect the varied research programs of faculty from the participating institutions. These include, but are not limited to: cellular and molecular biology; cell senescence; metabolism, endocrinology, and immunology; pharmacology and experimental pathology; reproductive biology, physiology, neurobiology, and behavioral science; biological engineering, related to nitrogen fixation and development of new symbiotic systems with blue-green algae; bio-mass and bio-energy (silviculture and fermentation technologies).

Admission: The primary criterion used in selection of students for this program is the demonstrated capacity of the applicant to do independent research. In addition to the application form, applicants submit official transcripts of undergraduate and graduate work, Graduate Record Examination (GRE) scores, three letters of reference, and evidence of outstanding research ability (e.g., publications, abstracts, etc.). More complete information may be obtained from the program director.

Applications and all supporting documents should be submitted to Dr. Joseph Bagshaw, Department of Biology and Biotechnology, Worcester Polytechnic Institute, 100 Institute Road, Worcester, MA 01609.

■ GRADUATE GRADING POLICIES

The grades of A and B (with plus and minus) are acceptable for graduate credit; anything lower than a B- is not acceptable. A Pass/Fail grading option is possible, where "P" (pass) signifies that the student has performed at a B- or above level. Incompletes are awarded at the discretion of the instructor.

■ GRADUATE STUDENT SERVICES

Graduate Housing

A limited number of on-campus housing spaces are available through the Office of Housing and Residential Programs. Incoming students have priority for this housing. Further details may be obtained from the Office of Housing and Residential Programs, or from academic departments.

Off-campus rooms and apartments for both men and women are available in the immediate area of the University. A limited listing of current housing opportunities is compiled by the Office of Housing and Residential Programs. Students without prior arrangement for University-owned housing are urged to arrive before registration to seek suitable housing in the area.

For information on meal plans, health insurance and health services, please refer to the section on Life at Clark.

■ GRADUATE TUITION AND OTHER CHARGES ACADEMIC YEAR 1995-96

Full-time Graduate Students:

Tuition: $18,700 per academic year (or $9,350 per semester)

In departments that define a full load as four courses per semester, the per-course charge is $2,337.50. The per-course charge varies in some departments according to their specific definition of a full program. Students should contact their department chairs to find out which scale applies.

Part-time Graduate Students:

Tuition is charged on a per-course basis according to the scale used in the student's department (generally $2,337.50 per course).

Special Graduate Students:
(nondegree candidates)

Tuition: $2,337.50 per course

Tuition and fees differ in the following programs:

Master of Business Administration

Master of Health Administration

(Contact the Graduate School of Management for further details.)

Master of Arts in Liberal Arts

Master of Public Administration

Master of Science in Professional Communication

(Contact the College of Professional and Continuing Education for further details.)

OTHER FEES

Health Insurance—payable at registration (mandatory)

Single Students	$589
Student/one eligible dependent	1,325
Student/two or more eligible dependents	2,061
Health Service Fee (optional)	220

Graduation Fee—payable at the time the thesis or dissertation is deposited with the Office of Student Records.

Master's Degrees	100
Doctoral Degrees	150

Students who do not write a thesis or dissertation, including those receiving the degree through an alternative program, must pay this fee no later than the date on which theses are due to the University format advisor (generally, April 15).

Nonresident Fee:	400

Payable August 1 and December 1: $200 per semester. All degree candidates who are not formally enrolled in coursework must pay the nonresident fee each semester until the final copy of the thesis or dissertation is approved by the University format advisor. If these fees are not paid by the close of the fiscal year, the student will be dropped from the program. (Fees double upon renewal of candidacy.)

Loan Deferment for Nonresident Students: There are no provisions for student loan deferments for nonresident students. Only those enrolled in classes on at least a half-time basis are eligible for student deferment status.

GRADUATE SCHOLARSHIPS, FELLOWSHIPS, AND ASSISTANTSHIPS

Graduate fellowships and scholarships are provided for well-qualified students by the University from endowed funds and from other sources. Financial aid to graduate students also is available in the form of grants from a number of special funds and, in some departments, from sponsored research grants. A limited amount of part-time employment is available in the various offices and departments of the University. Students who receive awards must obtain permission from the department before accepting employment.

Application for a scholarship or fellowship to begin in September should be made before February 15 to the chair of the department or director of the program in which the applicant expects to do major work. Late applications, after endorsement by the department, go to the dean of graduate studies and research for final approval.

RESEARCH FELLOWSHIPS

These fellowships may be awarded to graduate students who have fulfilled their residence requirements and who are pursuing a full-time doctoral program on campus.

TEACHING ASSISTANTSHIPS

Teaching assistants are assigned a variety of duties according to the needs of the department. Responsibilities include conducting discussion sessions, supervising laboratory sections, holding tutorial sessions, and grading papers and projects. Assistantships typically involve a commitment of approximately half time (an average of 17 1/2 hours a week). A tuition-remission scholarship or fellowship accompanies this award, and a usual stipend is $7,650 to $14,000, depending on program or department. The stipend is paid over an eight- or nine-month period, again according to department policies.

Note that the departments of biology, chemistry, economics, English, geography, history, physics, and psychology require teaching experience for graduate degrees.

■ ASSISTANTSHIPS

Assistantships are available in several departments. Assistantships involve a variety of services, including research with appropriate stipends, and usually provide the student with experience which will be useful in later professional work.

■ GRADUATE FELLOWSHIP, SCHOLARSHIP, AND DEPARTMENT FUNDS

Stipends for fellowships and scholarships are provided by endowed funds. For further information about these funds, contact the Graduate School Office.

■ RESEARCH CENTERS AND INSTITUTES

The George Perkins Marsh Institute, established in 1991, is dedicated to the study of the relationship between nature and society, emphasizing the human dimensions of global environmental change. The Institute builds on the accomplishments of the Center for Technology, Environment, and Development (CENTED), and draws on the University's 70-year tradition of excellence in teaching and research. The Institute is directed by a geographer, Dr. B.L. Turner II, and includes more than 60 researchers and students from the social sciences, sciences, and humanities.

The institute houses the Marsh Library and two research centers. CENTED is internationally recognized as one of the oldest and most prominent centers for the study of natural and technological hazards in the U.S. CENTED conducts basic and applied research related to major societal and global problems with a focus on natural and technological hazards, environmental degradation, and energy policy.

CENTED researchers are also examining the dynamics of social and ecological changes on land and water resource systems. This research emphasizes the resource use system as a whole (e.g., a farming system or a hydraulic system), the mediating roles of social institutions and organizations, and the necessity for long-term assessments. New research is developing around such themes as the role of environmental regulation in the location of industry and the effects of different of institutional structures on environmental impacts. Established in 1978, CENTED maintains close links with other international research centers, governmental agencies, and private voluntary organizations.

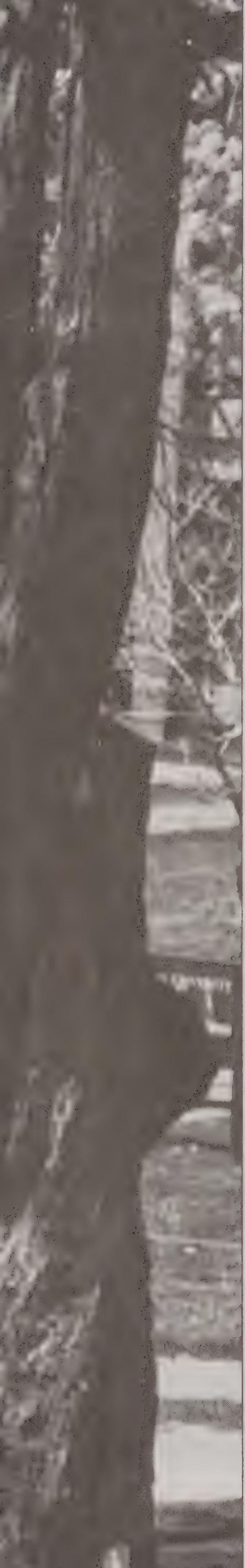
The Clark Labs for Cartographic Technology and Geographic Analysis (Clark Labs) is an international leader in the development and use of computer software and datasets for monitoring and modeling global environmental change. Clark Labs develops and distributes IDRISI, a software package for geographic analysis used at more than 3,000 sites in nearly 80 countries.

The Marsh Library houses a specialized research collection that is coordinated with the University's central library. Open to the public at large, this collection of books, technical reports, government documents, and data boxes focuses on risks and hazards; technology, environment and development; energy; water resources; and global environmental change, as well as subscriptions to some 500 journals and newsletters. The library has recently expanded its holdings in the fields of global environmental change, land-use policy, resource management, and urbanization. An on-line database provides access to an extensive collection on radioactive waste management, nearly 1,200 congressional hearings and reports, an extensive vertical file of articles on international development, and a collection of media responses to the Chernobyl nuclear accident. The Marsh Library is located at 18 Claremont Street.

The Jacob Hiatt Center for Urban Education was created in 1991 through a substantial endowment as a permanent partnership between Clark University and the Worcester Public Schools. The center brings together Clark researchers and public school teachers and administrators to find innovative ways to address the challenges and possibilities of contemporary urban schools, especially in light of the diverse cultural backgrounds of the students they serve. The center fosters the work of an interdisciplinary group of scholars and teachers, focusing on studies of language, culture, and learning. It supports teachers as researchers and educational leaders and has developed an innovative teacher education program and a close relationship with six demonstration schools in the city. The center seeks to set a new vision and standard for urban education nationwide. Dr. Sarah Michaels directs the center.

The Heinz Werner Institute for Developmental Analysis is devoted to the application of developmental analysis to all psychological and psychocultural phenomena. The institute is named for Heinz Werner (1890-1965), one of the leading psychologists of the past half century, and the first chairman of the Board of Directors of the Institute of Human Development, founded at Clark in 1957. The institute encourages interdisciplinary conferences and research cooperation among all groups whose primary interest is in the promotion of human development. Dr. Seymour Wapner is chair of the institute's Executive Committee.

The Institute for Economic Studies began its operation in January 1980. The institute is an integral part of the Economics Department, and its main objectives are to research significant economic issues, propose policy options to deal with them, and disseminate the results of the research—particularly its policy recommendations—to a broad audience. The institute provides a framework within which new curricula and teaching methods are developed. In addition, a Scholar-in-Residence Program was instituted in 1984 to stimulate the exchange of ideas and dialogue between guest scholars and members of the institute and economics faculty. The institute director is Attiat F. Ott.



LIVING at CLARK

■ LOCATED IN THE HEART OF NEW ENGLAND

An urban university, Clark University is located south of the downtown area in Worcester, Mass., a city located virtually in the heart of New England. Clark's 50-acre campus, a mile and a half, or a five-minute bus ride, from the commercial center of Worcester, has enough ivy, tall maples, and collegiate brick buildings to make a traditionalist happy. But its urban location helps keep Clark students connected to "the real world," with all of its activities and opportunities.

Worcester (with a city population of 160,000 and a college student population of 25,000) boasts, among other attractions, a world-class art museum, world-acclaimed concert hall, music festivals, theater, ethnic restaurants, coffee houses, and sporting events. Concerts, featuring stars like U2, The Cure, and Aerosmith, are the big attraction at the Worcester Centrum—a mecca for college students from all over New England. Worcester is home to the first-ever public park (used as a model for Central Park in New York City) and to the first-ever diner. The New England location provides students access to scenic places to hike and bicycle, as well as a fine ski area in nearby Mt. Wachusett.

Clark's location—Boston, Amherst, Providence, and Cambridge are all within an hour's drive—keeps students in touch with friends and events at other New England colleges. Because Worcester is at the geographical center of New England, the Berkshires, Green Mountains, and the beaches of Rhode Island and Cape Cod are within easy reach.

The city bus line stops at Clark, and at a nearby bus terminal and a railway station, taking students to and from Boston, Providence, New York, and points beyond. The Worcester Airport offers flights to major Eastern cities and is a few minutes' ride from campus.

■ STUDENT ACTIVITIES

The number and variety of student organizations and activities—almost 70 on campus alone—reflect the personalities and capture the interests of Clark's student body—from cycling to pre-law to politics, religion, and journalism.

Clark students have historically shown a range and depth of social awareness, earning them a reputation for social responsibility in the city of Worcester. They run a successful recycling center, tutor grade school children at the A.L.L. School a block from campus, act as Big Brothers and Big Sisters to neighborhood youngsters, and help out in soup kitchens and shelters for the homeless.

On campus, students are active policy makers, serving on academic, administrative, and trustee committees. The Student Council polls and evaluates responses of students on topics such as food in the dining halls and academic advising.

Students also can take advantage of the campus crafts studio, music organizations such as the Clark Bars, Madrigals and Counterpoints, and a number of joint programs with local colleges in orchestral, jazz, and computer music. Campus events include film series and live performances at the student pub. The Clark Speakers Forum regularly draws headline speakers, such as Gloria Steinem and Sam Donaldson, to campus.

■ HOUSING

Clark University provides housing for approximately 1,450 students in eight residence halls and nine houses. The residential staff members are available to assist students with a variety of personal and academic concerns and strive to provide a "living and learning" environment via social, recreational, and educational program opportunities. One residence hall, Dodd, is an all-women residence. All other halls and houses are coeducational. Two halls house only first-year students and one is designated primarily for upper-class students. Special interest housing includes a "substance awareness house," a "quiet house," and a "year-round house." First- and second-year students, unless commuting from home, are expected to live in University housing.

New student assignments are made in late June and returning students select their housing during a March/April room selection process.

Approximately one-third of Clark students commute from home or live in private apartments in the immediate neighborhood. A limited listing of available apartments is compiled by the Office of Housing and Residential Programs.

■ FOOD SERVICES

Daka Restaurants, the University's food service provider, operates dining facilities in the Higgins University Center serving students, faculty, and staff. Dining facilities are open continuously throughout the day and evening, serving breakfast, lunch, dinner, and late night snacks. First-year students living in Clark residence halls are required to select a meal plan; meal plans are optional to all other students.

Students may choose from a variety of menu options and pay with points from their debit cards over the semester. Food options include: a complete delicatessen; grilled and charbroiled food to order; fresh pasta and pizza; international fare; vegetarian meal choices; and salad bars with breads and soups.

■ HEALTH SERVICES

The Clark University Health Service is a primary care outpatient clinic that provides on-campus health care to full-time matriculated undergraduate students. It is staffed by physicians, nurse practitioners, registered nurses, and support staff. The clinic, located on the first floor of Wright Hall at 30 Downing Street, is open Monday through Friday 9 a.m. to 5 p.m. There is always a physician on call when the Health Service is closed.

Students may make an appointment at the Health Service with a clinician for diagnosis, treatment, follow-up, or counseling regarding health problems. Gynecological and contraceptive services are available.

Massachusetts law requires all full- and part-time students to enroll in a qualifying student health insurance plan offered by the University or in another health insurance plan with comparable coverage. Failure to submit proof of comparable coverage will result in a student being automatically enrolled in the Clark plan and charged accordingly. In compliance with state law, students may not register for classes until they are enrolled in an insurance plan.

■ DEAN OF STUDENTS OFFICE

The Dean of Students Office is concerned with the academic and personal well-being of students. Professional counselors are available to assist students and can make referrals to off-campus agencies when necessary or requested. The deans provide confidential services to assist students both in and out of the classroom.

The Dean of Students Office publishes Synergy, the Clark University Student Handbook, which outlines student support services, the code of general conduct, student activities, housing and residential programs, university committees, and standard University policies and procedures.

■ CAMPUS LIBRARIES

The Robert Hutchings Goddard Library, named for the Clark physicist who invented the rocket technology that made space travel possible, is the academic heart of the University and an architectural landmark. Goddard is both a traditional and an electronic library with collections and services that are a combination of time-tested and brand new. The collections include more than 530,000 volumes, 255,000 monographs and subscriptions to 2,000 periodical titles. The Library provides full Internet access and nearly 50 end-user subject specific data bases. As a member of the Worcester Consortium for Higher Education, Clark offers students the use of eight academic consortium libraries and a combined local collection of more than 3.5 million volumes.

Goddard Library also offers a viewing area for videocassettes; a listening area for compact discs, records, and tapes; a language lab; microcomputers; and terminals linked to the campus computing network. Through the University Computing Center, the Library's menu of electronic information sources including the Public Online Catalog is available twenty-four hours a day.

The Guy Burnham Map and Aerial Photography Library, founded in 1921, is an active cartographic information center. The collection, global in scope, contains over 200,000 maps and 7,500 aerial photographs, as well as atlases, journals, globes, map reference materials, and tourist information. A depository agreement with the U.S. Government Printing Office insures the availability of a full array of U.S. government maps. The library is located on the lower level of the Geography Building.

The Carlson Science Library, a branch of the Goddard Library, serves the disciplines of biology, chemistry, and physics. Located on the top floor of the Sackler Sciences Center, it houses selected science journals and a research collection of recent monographs. Full Internet access as well as subject specific databases are provided.

■ COMPUTER FACILITIES

The University Computing Center houses Clark's cluster of Digital Equipment Corporation (DEC) computers including a VAX 6410, a VAX 8530, and two multi-user

UNIX DEC station computers used for teaching, individual instruction, and research. Available through public access sites in Carlson Hall and the Goddard Library are numerous network terminals, personal computers, and printers for student use.

Open seven days a week, the centers also offer the use of a variety of graphics terminals, microcomputers, and software to meet the diverse needs of students enrolled in the humanities, social sciences, and sciences. Specialized equipment is also available in various departments in support of unique applications such as the cartography laboratory in Geography and the personal computer laboratory in the Graduate School of Management. Clark also offers personal computer facilities in Jonas Clark Hall and Carlson Hall that house Macintosh and IBM microcomputers. These facilities serve as group classroom space for scheduling of "hands-on" courses using both microcomputers and network terminals. The University also supports network connections to the international Internet and Bitnet education and research networks.

■ SCIENCE FACILITIES

The Arthur M. Sackler Sciences Center links the Biology, Chemistry, and Physics departments and houses facilities for both teaching and research. Interdisciplinary programs, such as Biochemistry and Molecular Biology; and Environmental Science and Policy, also are housed in Sackler. State-of-the-art scientific equipment, such as an electron microscope and high-field nuclear magnetic resonance (NMR) spectrometers, serve Clark students and researchers, as well as others in the central Massachusetts region. A centralized science library and microcomputer rooms also are housed here.

■ VISUAL & PERFORMING ARTS FACILITIES

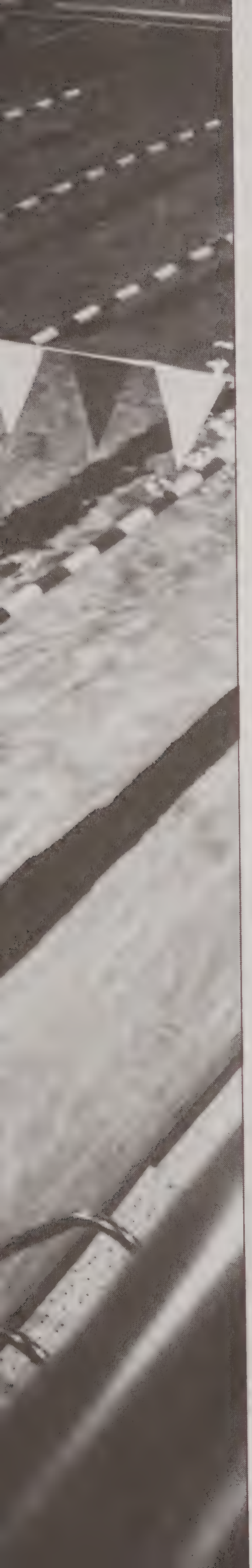
The George F. and Sybil H. Fuller Foundation Center for Music is a state-of-the-art facility for teaching, performing, rehearsing, and experimentally creating music. The center has two computer music studios containing powerful direct digital systems for composition, sound processing, and synthesis based in individual, personal computer work stations.

There is also studio space for drawing, painting, graphic design, visual studies, and photography as well as darkrooms, a sculpture and theater set construction studio, printmaking facilities, and costume design shop. A University Gallery provides learning experiences in arts management and exhibition design.

■ CAMPUS SECURITY

The Clark University campus is served by a 12-officer police force, staffed by professionals deputized by the Commonwealth of Massachusetts. Campus Police are armed and have full arrest and policing powers.

Campus Police take a proactive approach to campus security, offering educational programs to students, faculty, and staff on how to take precautions appropriate to an urban setting. Campus Police and Physical Plant maintain a network of 28 indoor and outdoor emergency telephones to ensure a quick response to security concerns. An escort service is available for students from 5 p.m. to 4 a.m. during the academic year within a quarter mile of the Clark campus. Clark University, as mandated by federal law, reports annually on the security of its campus. A copy of the Campus Security Report is available at Admissions House and Campus Police.



Clark ATHLETICS

At Clark, all types of students take part in athletics, from those who have spent years turning a natural talent into disciplined athletic achievement, to those who are seriously committed to playing a new sport, to those simply interested in working out.

■ DIVISION III INTERCOLLEGIATE SPORTS

Clark University is a Division III member of the National Collegiate Athletic Association. Division III—the division of the scholar athlete—recognizes the deep commitments students feel for both their studies and their sports. To successfully compete in intercollegiate sports within a rigorous academic environment takes commitment, discipline, and an appreciation of the benefits of participating in athletics, says Athletic Director Linda Moulton.

Clark's varsity teams are: (for women) basketball, crew, cross country, field hockey, soccer, softball, swimming and diving, tennis, and volleyball; (and for men) baseball, basketball, crew, cross country, lacrosse, soccer, swimming and diving, and tennis.

Approximately 300 student athletes represent Clark in intercollegiate athletics. Clark's men compete in the Constitution Athletic Conference, an athletic league that also includes Babson College, the Massachusetts Institute of Technology,

Norwich University, the U.S. Coast Guard Academy, Western New England College, and Worcester Polytechnic Institute. Clark's women compete in the New England Women's 8 Conference, which includes Babson College, the Massachusetts Institute of Technology, Mount Holyoke College, Smith College, Wellesley College, Wheaton College, and Worcester Polytechnic Institute.

■ SPORTS FACILITIES

Three thousand five hundred times each week, Clark students make use of the intercollegiate, intramural, physical education, and recreational programs at the George F. Kneller Athletic Center. The Kneller Athletic Center includes a gymnasium with three full-size courts for basketball and volleyball as well as space for indoor badminton, field hockey, running, lacrosse, soccer, softball, and tennis; a six-lane competition-size swimming pool with one- and three-meter diving boards; four racquetball/handball courts; two squash courts; two weight rooms—one with Cybex, Universal, and Fitron equipment, the other with free weights; a training room with facilities for rehabilitation; a dance studio, plus locker rooms, offices, a lounge, and conference rooms.

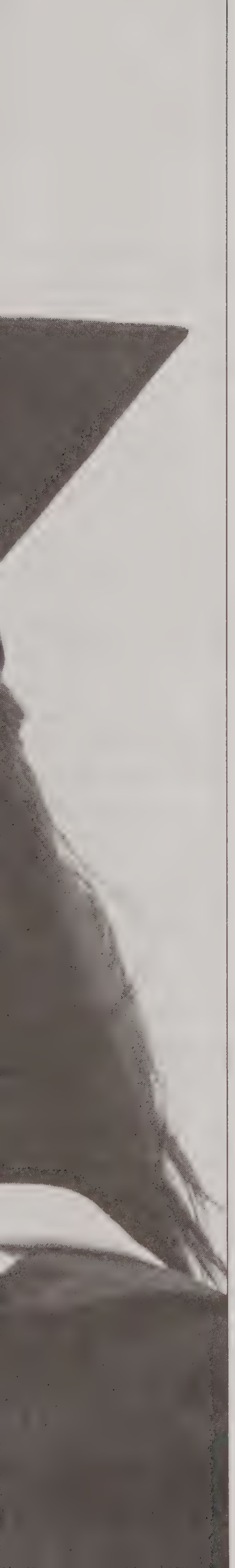
Students play outdoor sports at the Russ Granger Fields, which contain six tennis courts, a field hockey field, and lighted fields for baseball, lacrosse, soccer, and intramurals. Clark's intercollegiate softball field and cross country course are a short distance from the main campus, as is the boathouse on Worcester's Lake Quinsigamond, which is used by Clark's crews for both practice and competition.

■ CLARK UNIVERSITY'S HALL OF FAME

Clark has had more than its share of successes in its athletic history. For instance, the men's basketball team is the only Division III team in New England to have advanced to the NCAA national championship game and has an unprecedented 11 consecutive trips to the national tournament. Clark's women's basketball team has been a participant in postseason tournament play every season since 1978, including trips to the NCAA Division III Final Four in 1982 and 1983.

Clark's Athletic Hall of Fame includes individuals who have distinguished themselves and the University through their affiliation with Clark's athletic program. Members include Duane Corriveau, the all-time leading scorer in men's basketball with 1,875 career points; Catherine Desrosiers Bisceglia, the first four-year All-America athlete and a four-time national championship participant in swimming; Russ Granger, who was Clark's

Athletic Director for 30 years and who coached more than 70 seasons in four sports spanning five decades; Walter Halas, who guided the men's basketball team to 10 consecutive NCAA Division III basketball tournament berths; Liberty Mhlanga, who earned All-America honors in soccer; and Ziggy Strzlecki, an outstanding basketball player who went on to play semi-professionally.



LIFE AFTER *Clark*

Clark University prepares students to be confident and effective learners and equips them to deal with novel situations, to harness theory, to evaluate, to be highly adaptive, and to experience life richly.

The Clark University liberal arts education can lead anywhere. After Clark, graduates do just about everything: they start their own businesses; enter medical school; move up the corporate ladder; pursue advanced and professional degrees; work in fields ranging from human services to publishing to government to education.

Many of Clark's graduating seniors enroll directly in graduate and professional schools, while a substantial number work a few years before continuing their educations. A recent study ranked Clark among the national leaders in schools producing graduates who go on to earn Ph.D.s. Clark ranked 18th among the 925 institutions in the survey.

Clark professors are especially aware of graduate and professional school requirements and of the strengths of graduate programs across the U.S. Within the last several years, the percentage of Clark graduates who planned to enroll directly in graduate school rivaled that of the top schools in the United States, and these Clark students gained acceptance to many of the nation's most outstanding institutions. Among that long list of graduate and professional schools are many top schools of medicine, business, and law, including Yale, Harvard, M.I.T., the University of Chicago, Stanford, Brown, Johns Hopkins, and Georgetown.

CAREER SERVICES AND THE UNIVERSITY NETWORK

Clark's Alumni Contact File is a proven asset for recent graduates ready to land their first jobs. A phone call or letter away, over 800 graduates across the country stand ready to advise undergraduates and young alumni about employment trends, locations, and how to break into their fields.

Alumni also speak on campus, participate in career panels, attend networking nights to speak with students about their career plans, or serve as role models as part of the Alumni Mentor Program. Both established alumni and recent graduates—those who have found jobs in good economies and bad—return to Clark to tell students about their experiences.

Among the diverse career services offered at Clark are:

- Recruiting, both on- and off-campus (done by more than 200 organizations and professional and graduate schools each year)
- A Career Fair
- One-to-one counseling
- Mock interviews
- Workshops
- The Career Resource Library
- Advising committees for students preparing for law, medical, dental, and health-related schools of advanced study.
- Graduate/professional school advising.

WHO ARE CLARK'S ALUMNI?

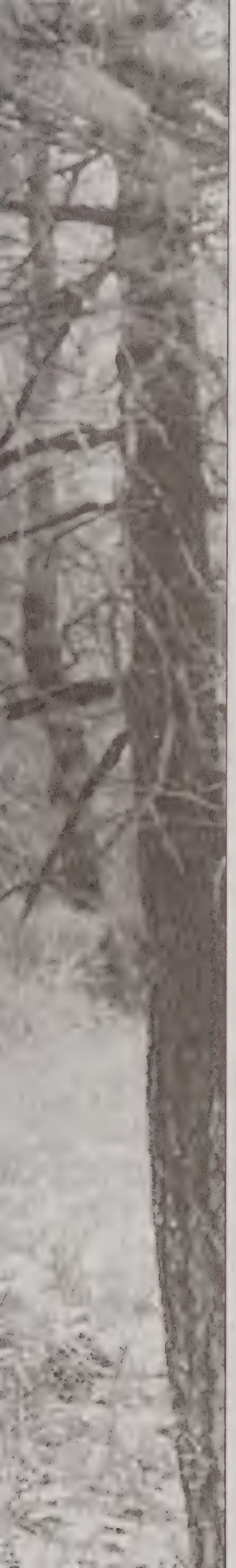
Clark University alumni have distinguished themselves in a multitude of professions. Ben Bagdikian, whose 45-year career in journalism includes a Pulitzer Prize, is the most widely respected media critic in the nation. Clark has produced a number of prominent journalists, including Paul Richter, Los Angeles Times White House correspondent; Timothy Clifford, producer for CBS News' "48 Hours"; Margaret Kennedy, editor of "House Beautiful"; and columnist George Lazarus of the Chicago Tribune.

The entertainment industry also has attracted Clark alumni. Alumnus John Heard is an actor whose credits include "In the Line of Fire," "Big," "Home Alone," and "The Pelican Brief." Stuart Ross wrote the hit Broadway musical "Forever Plaid." William Finkelstein was producer of "L.A. Law," and Steven DePaul is a coproducer of "NYPD Blue." Matt Goldman is a member of the popular New York performance artist trio Blue Man Group. Jeffrey Lurie, owner of the Philadelphia Eagles football team, also is president of Chestnut Hill Productions, which produced such films as "Sweet Hearts Dance" and "V.I. Warshawski." Marian Leighton helped found Rounder Records to preserve traditionally based music.

Clark alumni can also be found in business. Ron Shaich, who started the Clark General Store, is cofounder and cochairman of Au Bon Pain. Mark Freedman is president of Surge Licensing, which marketed the Teenage Mutant Ninja Turtles. Lydia Pastuszek is president of Granite State Electric Company.

Frederic Rosen is chairman of the board and chief executive officer of Ticketmaster.

In medicine, Clark alumni include Lewis Goldfrank, who is the subject of the popular book "Emergency Doctor" and director of emergency services at Bellevue Hospital in New York City. In law, Robert Cullen, prison specialist attorney in Georgia, is considered to be among the most successful public interest attorneys in the nation. Elizabeth Lederer is a well-known Manhatten district attorney and crime victim advocate. Environmentalists Liberty Mhlanga, who represented Zimbabwe at the Earth Summit, and Graham Hawks, executive director for the Tennessee River Gorge Trust, have distinguished Clark University in the area of environmental awareness.



The ENVIRONMENTAL *School*

For 75 years, Clark University has been addressing questions about the relationship between humankind and nature: What are the consequences of economic development, technology change and population growth? Can the Earth's life-support systems continue to sustain us? What alternative value systems and ways of living are needed, and which are possible? How have cultural and spiritual traditions of societies shaped their relationship with the natural world? What motivates individuals, groups and institutions to change their behavior? How can technology improve the environmental conditions on Earth? What kind of society do we want in the future, and what kind is compatible with sustainability?

Clark's new Environmental School seeks to help a new generation of students find answers to these questions by offering a liberal arts education organized around the theme of the relationship between humankind and nature. The Environmental School's mission is to provide:

- a basic understanding of the physical, technological, aesthetic, spiritual, historic, political, and organizational aspects of the interactions of humans with nature, as well as the capacity to analyze critically these interactions;

- an appreciation for, and active experience in, interdisciplinary and holistic approaches to problem formulation and analysis;
- an understanding of where students' chosen field of specialization (major) lies with respect to the larger questions of human-nature interaction;
- an ability to communicate with scholars and professionals in the diverse disciplines that address human-nature relationships; and
- proficiency in cutting-edge skills and methodologies required for global-scale analyses and holistic approaches.

A STRUCTURED AND BROAD CURRICULUM

The Environmental School gives students who elect this option the opportunity to focus on the environment as they pursue a liberal arts education. Students' studies within their major are integrated into the Environmental School curriculum.

Students generally apply to the Environmental School prior to entering their first year at Clark, although admission is possible until the end of the first year. Those enrolled study the Earth and its human use from the perspectives of the life sciences, the social sciences, the humanities and the arts. The curriculum consists of nine core courses—chosen from approximately 15 available courses—and two advanced courses within a student's major. The curriculum is sequential, demanding increasingly sophisticated and advanced work. It includes a research colloquium in the second semester of the senior year.

PURSUING A MAJOR WITHIN THE ENVIRONMENTAL SCHOOL

Study in the Environmental School can be combined with approximately half of the majors offered at Clark, including, for instance, Art; Biology; Economics; English; Environmental Science and Policy; Geography; International Development and Social Change; and Sociology.

For more information about the Environmental School, please contact Dr. Halina S. Brown, Director of the Environmental School, Environmental Science and Policy Program, Sackler Sciences Center, B/P 356, ext. 7655 or Marcia V. Szugda, Program Assistant, at the same extension.

COURSE DESCRIPTIONS

ES 010 INTRODUCTORY SEMINAR/Seminar

This seminar emphasizes the multiplicity of ways of conversing about the environment, and introduces students to three types of literacy in thinking about human-environment relationships: belletristic, description of nature, and scientific discourse. The course is structured around a set of major books from various genres of scholarship. Mr. Conron, Mr. Mitchell, and Mr. London

ES 120 GEOGRAPHIC INFORMATION SYSTEMS/Lecture, discussion

This course introduces computer assisted systems for spatial display and analysis of environmental data and problems, and their applications to the study of global environmental change, environmental public health, and urban and resource planning. A computer lab is required. Mr. Eastman

ES 121 SCIENCE, UNCERTAINTY AND DECISIONS/Lecture, discussion

An introduction to the use of science information in making public and private choices under uncertainty, focusing on environmental themes. Applications of probability, statistics, extrapolation, risk assessment, and computer models are included. This course contrasts public demand and expectations with scientific capabilities and methods. A lab using computers and exploring science in contemporary debate is required. Mr. Goble

ES 122 DATA, UNCERTAINTY, AND INFORMATION/Lecture, discussion

This course will explore approaches to obtaining useful information from economic data. It is designed particularly for students in the humanities and social sciences without previous formal analysis courses. The goals of the course are to provide skills for the critical understanding of the quantitative arguments of environmental issues and an enhanced level of understanding of the way in which scientific arguments are developed. Mr. Puffer

ES 130 EARTH SCIENCE/Lecture, discussion

This course introduces the biochemical flows that operate globally to maintain the biosphere and geosphere, using forest canopy as a model. The main objective of the course, conducted at the Tower Hill Botanic Garden in West Boylston, is to engage students in hypothesis testing through active gathering, processing, and interpretation of data. Mr. Herwitz

ES 131 ECOLOGICAL SYSTEMS/Lecture, discussion

An introduction to the major paradigms of ecological science and practice—population, community, landscape, and human ecology—this course examines ecosystems, including humans, on local and regional levels but with links to the global level. The objective of the course is to ground students in ecological theory and methods, and to explore the human roles in the evolution maintenance and destruction of ecosystems. Computer lab is included. Ms. Foster, Ms. Rocheleau

ES 132 ENVIRONMENTAL ETHICS/Lecture, discussion

This course introduces students to the main types of ethical reasoning and ethical theories. These concepts are then applied to a series of case studies, such as nuclear waste, release of genetically engineered organisms, banning of DDT in third world countries, hazardous waste disposal, protection of endangered species, and others. Mr. Derr

ES 210 SACRED SPACES/Lecture, discussion

An exploration of traditional and contemporary experience of the sacred in spatial terms: through archetypes (cave, mountain, threshold, mandala), geometric harmonies, the relationship between nature and architecture (geomancy or Seng-Shui), and the natural world as Gaia or sacred geography. Ms. Buie

ES 211 RESOURCES AND ENVIRONMENT: PERCEPTIONS AND USE/Lecture, discussion

This course examines how individuals and groups perceive and valuate nature and resources and how social movements arise around that issue. The history of the environmental movement in the United States is covered as well as comparative international perspective on current environmental movements. Mr. Mitchell

ES 212 ENVIRONMENTAL POLICY AND MANAGEMENT/Lecture, discussion

This course examines the role of institutions and organizations in environment and resource use and management, from local to global scales. Emphasis is placed on how policies are developed and implemented and what they mean for the daily user/manager of natural resources. Mr. Cook, Ms. Emel

ES 213 THE EARTH TRANSFORMED BY HUMAN ACTION/Lecture, discussion

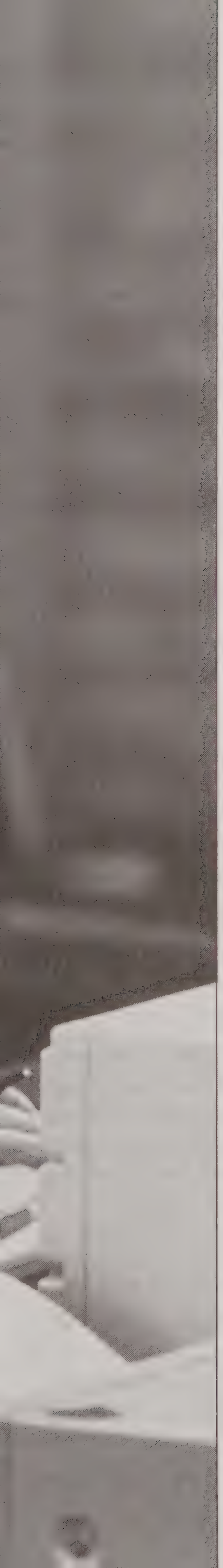
This course traces the course of human modification and transformation of the earth since antiquity, but with particular emphasis on the last 300 years. Integrating history, geography, and other fields, it examines the changing kind, pace, and magnitude of alterations and explores interpretations of their causes. Mr. Turner

ES 220 PHILOSOPHY OF ENVIRONMENT/Lecture, discussion

An introduction to a broad range (western and non-western) of traditional and contemporary understandings of the human relationship to the natural world, as expressed through spiritual traditions, contemporary philosophy, and environmental activism. Ms. Buie, Mr. Wright

ES 290 SENIOR RESEARCH COLLOQUIUM: OUR COMMON FUTURE/Lecture, discussion

The aim of this course is to provide closure to the ES experience through a shared intellectual debate and reflection by the School's faculty and students on the major themes of sustainable earth. It will consist of a colloquium in which all ES students will bring their ES experience to bear on major themes (such as Agenda 21). An intensive research experience accompanies the debate. The research can be undertaken in multiple ways—with a faculty mentor, on a faculty project, or with another course or group project. Staff



MAJORS *and* MINORS

Art

ART HISTORY AND CRITICISM

STUDIO ART

See Department of Visual and Performing Arts

Ancient Civilization

■ PROGRAM FACULTY

Michael Pakaluk, Ph.D., program coordinator: history of ancient philosophy, Plato, Aristotle

Paul F. Burke Jr., Ph.D.: Greek and Latin language and literature, Classical mythology, Classical art and archaeology, ancient history

Everett Fox, Ph.D.: Jewish ritual and folklore, Classical Jewish thought

William A. Koelsch, Ph.D.: cultural-environmental history, history of geography

Ivy Sun, M.A.: Latin

Rhys F. Townsend, Ph.D.: ancient Greek art and architecture, underwater archaeology, Classical tradition in Western art, early Christian and Byzantine art

■ PROGRAM IN ANCIENT CIVILIZATION

The Program in Ancient Civilization consists principally of courses offered by the four primary faculty participants, whose scholarly fields are art history, classics, Jewish studies, and philosophy. Courses offered by other

Clark faculty that fall into the general category of ancient civilization will be cross-listed as available, and courses from other Worcester Consortium colleges may be used to enhance this major.

The program offers an interdisciplinary undergraduate major and makes available courses covering the entire spectrum of ancient Mediterranean culture including Greek, Hebrew, and Latin languages. Emphasis throughout the program is placed on developing familiarity with the ancient world for a sound understanding of the roots of modern Judaeo-Christian culture. The purpose of the major in particular is to supply the student with a sound interdisciplinary knowledge of the ancient Greco-Roman and Judaeo-Christian roots of Western civilization.

■ THE MAJOR IN ANCIENT CIVILIZATION

Majors are expected to acquire a working knowledge of at least one of the principal languages of the ancient Mediterranean (Classical Greek, Hebrew, or Latin); this language component of the major program ensures direct access to the culture, literature, philosophy, and history of the ancient world. Program faculty also wish their courses to be accessible to the general undergraduate population in order that as many Clark students as possible may be introduced to the various aspects of the ancient world by the comprehensive series of courses brought together here. By incorporating art history, Jewish studies, and philosophy with what has been traditionally identified as classics (Greek and Latin language and literature), the Clark Program in Ancient Civilization presents established disciplines in a stimulating and original configuration.

Students majoring in ancient civilization, and in some related areas, are eligible to apply for admission to the Intercollegiate Center for Classical Studies in Rome, where they can spend a semester studying Classical literature and archaeology.

Major Requirements

In order to graduate as an ancient civilization major, a student must complete successfully at least ten courses in ancient civilization. These courses must include:

1. at least two courses, not both in the same department, from the group of foundation courses:
   Art History 101, Introduction to Western Art I
   Art History 110, Ancient Greek Art
   Classics 111, Roman Art and Architecture
   Classics 121, Introduction to Greek Culture
   History 174, The Jewish Experience
   Philosophy 141, Socrates, Plato, and Aristotle
2. at least one semester course at or above the intermediate level (language 103) in Greek, Hebrew, or Latin.
3. a one-semester senior seminar, to be taken preferably during the second semester of the senior year, to include the writing of a major research paper, and to be arranged in consultation with at least two members of the program faculty by the end of the junior year.

■ THE MINOR IN ANCIENT CIVILIZATION

An interdepartmental minor in Ancient Civilization consists of a total of six courses listed below, or other courses approved for the minor by program faculty. These courses must include:

1. At least two courses, not both from the same department, from the group of foundation courses listed above.
2. At least two 200-level courses.

Students minoring in Ancient Civilization are strongly encouraged (but not required) to study Latin, Greek, or Hebrew for their remaining two courses.

■ COURSES

A. *Art History*

101 INTRODUCTION TO WESTERN ART I

Refer to course description under Art History 101. Mr. Townsend, Ms. Levesque/Offered every year

105 THE AEGEAN WORLD

Refer to course description under Art History 105. Mr. Townsend/Offered every other year

106 INTRODUCTION TO ARCHAEOLOGY

Refer to course description under Art History 106. Mr. Townsend/Offered every other year

109 CLASSICAL MYTH AND THE GREEK IDEAL

Refer to course description under Art History 109. Mr. Townsend/Offered every other year

110 ANCIENT GREEK ART

Refer to course description under Art History 110. Mr. Townsend/Offered every other year

114 ANCIENT CITIES AND SANCTUARIES

Refer to course description under Art History 114. Mr. Townsend/Offered every other year

215 THE TEMPLE BUILDERS: ARCHITECTURE IN ANCIENT GREECE

Refer to course description under Art History 215. Mr. Townsend/Offered periodically

219 SPECIAL TOPICS: ANCIENT ART

Refer to course description under Art History 219. Mr. Townsend/Offered periodically

B. *Classics*

GREEK

101/102 INTRODUCTORY GREEK

Refer to course description under Classics. Mr. Burke/Offered every year

299 SUPERVISED READING IN PHILOSOPHICAL GREEK

A close study of selected philosophical texts in Greek. Mr. Pakaluk/Offered every semester

LATIN

101/102 INTRODUCTORY LATIN

Refer to course description under Classics. Staff/Offered every year

299 SUPERVISED READING IN PHILOSOPHICAL LATIN

A close reading of selected philosophical texts in Latin. Mr. Pakaluk/Offered every semester

CLASSICS COURSES TAUGHT IN ENGLISH

005 ROMANS AND BARBARIANS

Refer to course description under Classics 005. Mr. Burke/Offered every other year

100 ANCIENT GREECE AND PERSEUS 1.0

Refer to course description under Classics 100 Mr. Burke/Offered every other year

124 INTRODUCTION TO CLASSICAL MYTHOLOGY

Refer to course description under Classics 124. Mr. Burke/Offered every other year

135 CLASSICAL GREEK TRAGEDY

Refer to course description under Classics 135. Mr. Burke/Offered every other year

157 THE AGE OF NERO

Refer to course description under Classics 157. Mr. Burke/Offered every other year

262 JEWS AND CHRISTIANS IN THE ANCIENT WORLD

Refer to course description under Classics 262. Mr. Burke/Offered every other year

283 NATURE AND CULTURE IN THE ANCIENT WORLD/DISCUSSION

Refer to course description under Geography 283. Mr. Koelsch/Offered every other year

C. *Jewish Studies*

HEBREW

101/102 ELEMENTARY HEBREW

Refer to course description under Foreign Languages and Literatures/Hebrew. Staff/Offered every year

103 INTERMEDIATE HEBREW

Refer to course description under Foreign Languages and Literatures/Hebrew. Staff/Offered every year

104 INTERMEDIATE/ADVANCED HEBREW

Refer to course description under Foreign Languages and Literatures/Hebrew. Staff/Offered every year

JEWISH STUDIES COURSES TAUGHT IN ENGLISH

123 THE MIDRASHIC TRADITION

Refer to course description under Jewish Studies. Mr. Fox/Offered every other year

D. *Philosophy*

141 SOCRATES, PLATO, AND ARISTOTLE

Refer to course description under Philosophy 141. Mr. Pakaluk/Offered every year

250 PLATO/SEMINAR

Refer to course description under Philosophy 250. Mr. Pakaluk/Offered every other year

251 ARISTOTLE/SEMINAR

Refer to course description under Philosophy 251. Mr. Pakaluk/Offered every other year

E. *History*

174 THE JEWISH EXPERIENCE

Refer to course description under History 174. Staff/Offered every year

276 MODERN JEWISH HISTORY AND THOUGHT

Refer to course description under History 276. Staff/Offered every other year

F. *Comparative Literature*

120 THE EPIC JOURNEY

Refer to course description under Comparative Literature 120. Mr. Burke/Offered every other year

G. *Geography*

174 GREEKS AND BARBARIANS IN THE ANCIENT ECUMENE

Refer to course description under Geography 174. Mr. Koelsch/Offered every year

Biochemistry and Molecular Biology

PROGRAM FACULTY

David L. Thurlow, Ph.D., program director: RNA-protein interactions

John J. Brink, Ph.D.: metabolic regulation, pharmacology, neurochemistry

Frederick Greenaway, Ph.D.: bioinorganic chemistry, magnetic resonance

Dale F. Mierke, Ph.D.: biomolecular structure, magnetic resonance, spectroscopy

Donald J. Nelson, Ph.D.: protein chemistry, pharmacology

Timothy A. Lyerla, Ph.D.: somatic cell genetics

Thomas J. Leonard, Ph.D.: molecular biology, microbial genetics

AFFILIATE FACULTY

George E. Wright, Ph.D.: pharmacology, drug-DNA polymerase interactions

UNDERGRADUATE PROGRAM

The Biochemistry and Molecular Biology Program offers an interdisciplinary major that draws on the faculty and course resources of the Departments of Biology and Chemistry. Designed to provide students with an in-depth exploration of an area of science that is perhaps the most exciting and actively growing of any today, the program is suitable for students who want to (1) pursue graduate studies in the area, (2) enter medical school with a strong background in basic science, or (3) take laboratory or other science-related positions after graduation. Those wishing to major in biochemistry and molecular biology must select an advisor within the program and file a plan of study with the program director.

MAJOR REQUIREMENTS

Students first obtain a solid grounding in biology, chemistry, physics, and calculus and then take Biochemistry, a year-long course sequence that covers our current understanding of the field. After that, there is a choice between two "tracks," or alternative ways to complete the major, depending on the individual's interests.

The core curriculum consists of the following required courses:
Introduction to Calculus (Math 110-112, 120 and 121, or 124 and 125)
Introduction to Physics (Phys 110 and 111, or 110 and 112)
Introductory Chemistry (Chem 101 and 102)
Introduction to Biology (Biol 101 and 102)
Organic Chemistry (Chem 131 and 132)
Physical Chemistry I (Chem 260)
Biochemistry I and II (Bcmb 271 and 272)

The student will also complete one of the following two groups of courses, emphasizing either biochemistry or molecular biology.

Courses required for the biochemistry track:
Molecular Biology (Biol 105), Genetics (Biol 118), or Microbiology (Biol 109)
Cell Biology (Biol 137) or Physiology (Biol 240)
Bioanalytical Chemistry (Bcmb 144)
Biophysical Chemistry (Bcmb 264)

Courses required for the molecular biology track:
Genetics (Biol 118) or Molecular Biology (Biol 105)
Cell Biology (Biol 137) or Microbiology (Biol 109)
Molecular Genetics (Bcmb 228) or Structure and Function of Nucleic Acids (Bcmb 276)
Recombinant DNA (Bcmb 231)

In addition, students must complete two additional courses related to biochemistry and molecular biology. This requirement may be satisfied with any of the program offerings, or a directed research course, or any biology or chemistry course in the list above (and not already used to fulfill a requirement), or other biology or chemistry courses approved by the advisor.

■ HONORS PROGRAM

A student interested in the honors program should contact the program faculty member with whom the student would like to do research and then apply in writing to the program director for admission. A "B" average is required. In addition to the course requirements listed above, honors candidates must

(a) carry out a research project under the supervision of a faculty member in the Biochemistry and Molecular Biology Program,

(b) submit an honors thesis or publication based on the research project,

(c) present the research results in a public seminar, and

(d) pass a comprehensive oral examination. Students are encouraged to begin their research in the summer following the junior year, if not earlier.

■ COURSES

070 PRESERVING GENOMES/ FIRST-YEAR SEMINAR

See description under Chemistry 070
Mr. Thurlow/Offered every other year

105 MOLECULAR BIOLOGY/LECTURE

An examination of the molecular basis of life. Topics include the biological macromolecules (DNA, RNA, proteins), DNA replication, the mechanism of protein synthesis, the genetic code, gene regulation, introns and other complexities of eukaryotic genes, and the origin of life. Prerequisite: Biology 101 and 102. Chemistry 101/102 recommended.
Staff/Offered every year

144 BIOANALYTICAL CHEMISTRY/ LECTURE, LABORATORY

This laboratory-oriented course presents both theoretical and practical aspects of quantitative analysis in biological systems. Topics discussed include: chromatography, electrophoresis, immunochemistry, ultracentrifugation, absorption and fluorescence, enzyme analyses, and radioactivity counting procedures. Prerequisite: Chemistry 132. Mr. Nelson/ Offered every other year

228 MOLECULAR GENETICS/LECTURE, SEMINAR

Explores recent discoveries in the molecular genetics of prokaryotes and eukaryotes, with emphasis on new findings from recombinant DNA technology and DNA sequencing. Topics include: protein synthesis, RNA transcription, gene regulation, repetitive DNA, gene cloning, split genes, gene families, transposable elements, oncogenes, and antibody gene rearrangement. Intended primarily for seniors and graduate students. Prerequisite: Bcmb 272 or Biology 118 or permission of instructor. Mr. Thurlow/ Offered every other year

231 RECOMBINANT DNA/LECTURE, LABORATORY

An introduction to gene cloning techniques.

Students clone Escherichia coli DNA in a plasmid vector; specific experiments include DNA purification, restriction enzyme digestion, agarose gel electrophoresis, DNA ligation, bacterial transformation, genetic characterization of recombinants, restriction mapping, and DNA sequencing. Two laboratory periods per week. Prerequisites: Biology 118 in addition to Biology 109 or Bcmb 271. Staff/Offered every other year

252 BIOINORGANIC CHEMISTRY/LECTURE

This course discusses the chemistry of metals in biological systems and models of these systems. There is a lengthy introduction to general principles and theories of inorganic chemistry and of metal ion and drug transport in biological systems. This is followed by an introduction to physical techniques used in studying metalloproteins. The major part of the course is a discussion of the application of these principles and methods by way of a survey of metallobiological systems. Prerequisite: Permission of instructor. Mr. Greenaway/ Offered every other year

264 BIOPHYSICAL CHEMISTRY/ LECTURE, LABORATORY

This rigorous course in physical chemistry, offered as an alternative to Chemistry 262, emphasizes the physical chemistry of biological systems: enzyme kinetics, spectroscopy of biological systems, macromolecules, transport processes, and x-ray diffraction. Prerequisite: Chemistry 260. Mr. Nelson/Offered every other year

266 BIOMOLECULAR NMR

Refer to course description under Chemistry 266 Mr. Mierke/Offered every other year

271 BIOCHEMISTRY I/LECTURE, LABORATORY

272 BIOCHEMISTRY II/LECTURE

This two-semester course provides a comprehensive and up-to-date survey of the field of biochemistry. The first semester covers cell metabolism and protein structure and function; the second semester deals with nucleic acid and protein metabolism and other topics. A laboratory component for the first semester acquaints students with methods and instrumentation used in biochemical research. Prerequisites: Biology 101, 102, and Chemistry 132. Mr. Brink, Mr. Nelson, Mr. Thurlow/ Offered every year

273 NEUROCHEMISTRY/LECTURE

The metabolic aspects of brain amines and biopolymers are considered in relation to neural function. Effects of drugs on memory processes, pain, and emotion are discussed in terms of biochemical mechanisms. Prerequisite: Biology 101, 102, and Chemistry 132, or permission of instructor. Mr. Brink/Offered every other year

275 PROTEIN CHEMISTRY/LECTURE

Discusses the structure and function of biologically important macromolecules. Particular emphasis is placed on proteins (enzymes and noncatalytic proteins), protein synthesis from nucleic acids, and the structure and function of biological membranes. Prerequisite: Chemistry 132. Mr. Nelson/Offered every other year

276 STRUCTURE AND FUNCTION OF NUCLEIC ACIDS/LECTURE

This course discusses principles of nucleic acid structure, including types of helices, primary structure, secondary structure, and supercoiling. In the second half of the course, students discuss papers relating the principles of structure to a particular function such as storage and expression of information, catalysis, and evolution of the genetic code. Prerequisite: Biochemistry 272. Mr. Thurlow/Offered every other year

277 BIOCHEMISTRY OF DISEASE/ LECTURE, DISCUSSION

This course considers biochemical systems that are perturbed in metabolic regulatory processes, as in cardiovascular disease, hormonal imbalance (diabetes), and genetic defects (Tay-Sachs disease). The effects of environmental influences represented by drug and nutrient components also are considered. Prerequisite: Biology 101, 102, and Chemistry 132; or permission of instructor. Mr. Brink/ Offered every other year

299, SECTION 1 DIRECTED READINGS/DISCUSSION

Advanced readings in the scientific literature under the direction of a professor. Prerequisite: permission of instructor. Staff/Offered every semester

299, SECTION 2 DIRECTED RESEARCH/LABORATORY

Individual investigations involving laboratory research under the direction of a professor. Offered for variable credit. Prerequisite: permission of instructor. Staff/Offered every semester

299, SECTION 9 INTERNSHIP

Internships are arranged through the Internship Office within the Office of Career Planning and Services. Students may register under Bcmb 299.9 provided that the Clark internship supervisor is a member of the Biochemistry and Molecular Biology Program. Staff/Offered every semester

Biology

■ DEPARTMENT FACULTY

Thomas J. Leonard, Ph.D., chair: molecular biology, mycology, microbial metabolism

Vernon Ahmadjian, Ph.D.: botany, mycology, symbiosis

Joseph C. Curtis, Ph.D.: cell biology, electron microscopy, endocrinology

Susan A. Foster, Ph.D.: evolution, behavior and ecology

H. William Johansen, Ph.D.: phycology, marine biology

Linda M. Kennedy, Ph.D.: physiology, neurobiology, sensory function, taste

Todd P. Livdahl, Ph.D.: population biology, community ecology, evolution, biostatistics

Timothy A. Lyerla, Ph.D.: developmental and biochemical genetics, human genetic diseases

Nicholas S. Thompson, Ph.D.: animal behavior, evolutionary theory

■ ADJUNCT FACULTY

Charles H. Blinderman, Ph.D.: history of biology, Darwinism, human evolution

Halina S. Brown, Ph.D.: health and risk assessment, environmental chemistry, regulatory toxicology

Frederick T. Greenaway, Ph.D.: bioinorganic chemistry, enzymology

Stanley R. Herwitz, Ph.D.: hydrology, soil/water plant relationships, biogeography, field methods and instrumentation

Donald J. Nelson, Ph.D.: biochemistry, bioinorganic chemistry

David L. Thurlow, Ph.D.: molecular biology

■ AFFILIATE FACULTY

Clayton B. Cook, Ph.D.

Craig Ferris, Ph.D.

Philip Robakiewicz, Ph.D.

■ EMERITUS FACULTY

John J. Brink, Ph.D.

John T. Reynolds, Ph.D.

■ UNDERGRADUATE PROGRAMS

The department offers courses that (1) prepare students for work and advanced study in the biological and biomedical sciences, (2) provide support for other programs within the University that require students to obtain a background in one or more subfields of biology, and (3) meet the needs of nonscience majors who wish to integrate the perspectives of the science of biology into a liberal arts curriculum. The major in biology is especially suitable for students who intend to go on to professional schools in the health sciences or graduate work in a variety of subfields of the biological sciences.

The department provides a set of requirements for students wishing to optimize their breadth of exposure to the field as a whole. The department encourages students to identify an area to emphasize within biology, and to plan a sequence of courses that will provide depth of exposure to the topics within that area, including a research experience if possible. The department maintains active research programs in three general fields of study (Cell & Molecular Biology, Ecology & Evolution, and Neuroscience) and offers a specialized curriculum in Ecology & Evolution which has requirements tailored to enable students to emphasize that area. Specialized curricula for biology majors wishing to emphasize Cell & Molecular Biology and Neuroscience are being planned.

Prospective majors are urged to consult with an advisor selected from the department's faculty. With careful guidance a student can maximize the benefits associated with the options available within the major. Included among these options are opportunities to participate in ongoing research in the honors program, specialized research courses, and internships.

Please note that the two semester course, Introduction to Biology (Biology 101 and 102) is a prerequisite for all other courses in biology that will be used to meet the requirements for a major.

Requirements for the generalized biology major

- ten courses in biology, including Biology 101 and 102 (see below);
- two courses in chemistry (Chemistry 101 and 102);
- courses in mathematics to include a year of calculus (Mathematics 110, 111, 112, Mathematics 120 and 121, or Mathematics 125 and 126);
- two additional courses in chemistry, geology, mathematics or physics, at the 100 level or higher (128 or higher in mathematics);

- nine courses outside the fields of biology, chemistry, geology, mathematics, or physics.

Science and mathematics courses offered to meet the major requirements may not be taken with a "pass" option.

At least two of the ten required biology courses must be at the 200 level or above, and one must be completed in each of the following areas:

(1) cellular and molecular biology, including Genetics (Biology 118), Cell Biology (Biology 137), Biochemistry (Biology 217);

(2) organismal biology, including Microbiology (Biology 109), Introduction to Plant Biology (Biology 110), Symbiosis and Parasitism (Biology 211), Comparative Vertebrate Morphology (Biology 112), Physiology (Biology 240); and

(3) population biology, including Biodiversity (Biology 104), Marine Biology (Biology 114), Ecology (Biology 216), Population Biology (Biology 220).

Requirements for the Curriculum in Ecology & Evolution

- Chemistry 101, 102;
- Mathematics (110, 111, 112), or (120, 121), or (125, 126) [i.e. one year of calculus];
- Two additional science courses chosen from the following: Chemistry 131, 132 (organic chemistry), Chemistry 142 (environmental chemistry), Physics 110,111 (introductory physics) Physics 115 (computer simulation), Physics 130 (energy sources and systems), Geology 100 (introduction to geology), Earth Systems Science (see course description in Environmental School listings), Mathematics 130 (linear algebra), Mathematics 131 (multivariate calculus), Mathematics 147 (probability theory), Mathematics 164 (mathematical modelling).
- Two semesters of introductory biology (Biol 101, 102);
- Ecological Systems (see course description in Environmental School listings) or Evolution;
- two courses that are primarily informational in content, aimed at describing a wide variety of aspects of the natural environment or evolution, including 103 (Biogeography), 104 (Biodiversity), 110 (Introduction to Plant Biology), 112 (Comparative vertebrate morphology), 114 (Marine Biology), 115, (Plant Species Diversity);
- two courses with an analytical or theoretical orientation, including 118 (Genetics), 135 (Paradox of Animal Sociality), 216 (Ecology), 220 (Population Biology);
- one course that develops research techniques: Biology 109 (Microbiology), Biology 200 (Laboratory in Ethology), Biology 280 (Biostatistics and Computer Applications), Biology 213 (Forest Hydrology Field Methods);
- one seminar course: Biology 222 (Community Ecology), Biology 204 (Watershed Ecology), Biology 223 (Topics in Marine Biology), Biology 282 (Animal Social Life), Biology 211 (Symbiosis and Parasitism); and
- capstone project: at present, this can be fulfilled through a directed research project with one of the faculty members on the curriculum committee, or an internship in an area relevant to ecology and evolution, as approved by the curriculum committee.

SPECIAL FIELD COURSES

Clark University maintains formal affiliations with the following organizations, enabling students to apply for admission and preferential financial aid consideration for two special course programs. Courses from these organizations can be taken in place of other courses required for either the generalized biology major or the curriculum in Ecology & Evolution.

The Bermuda Biological Station is an internationally renowned center for marine biological and oceanographic research. One course each year (Marine Biodiversity, COPACE) uses the Biological Station as a site for field trips; in addition, intensive summer field courses are available for qualified Clark students (Biological Oceanography, Coral Reef Ecology, Molecular Ecology of Marine Symbioses, Tropical Marine Invertebrates, Biology of Fishes, Hazard Assessment of Marine Contaminants, Remote Sensing Oceanography). Any of these courses can be taken for biology major credit.

The School for Field Studies operates six centers at which semester-long field-oriented courses may be taken for four credit units:

- The Center for Rainforest Studies (Australia)
- The Center for Marine Resource Studies (Turks and Caicos Islands, Caribbean)
- The Center for Wildlife Management Studies (Kenya)
- The Center for Island Management Studies (Republic of Palau)
- The Center for Sustainable Development Studies (Costa Rica)
- The Center for Coastal Studies (British Columbia, Canada)

Clark students are also eligible for admission into summer courses at those five centers (Community Wildlife Management, Kenya; Marine Parks Management, South Caicos Island; Conserving Marine Resources and Coastal Rainforests, British Columbia; Management of Tropical Island Resources, Palau; Alternative Strategies for Preserving Tropical Ecosystems, Costa Rica). Students interested in taking any of these courses for credit toward the major must first take at least one course in either the organismal or population areas (biology course categories 2 or 3 described above).

The specific course offerings at the Bermuda Biological Station and the School for Field Studies may change each year. Recent, detailed information on the School for Field Studies and the Bermuda Biological Station is available in the department office. Students who wish to apply for these or other off-campus course programs are urged to consult with their advisor or department chairman to ensure that the program will satisfy the student's needs for a well-planned biology major.

HONORS PROGRAM

Well-qualified upper-division majors in biology are eligible for admission to a program that can lead to a bachelor of arts degree with honors in biology. A candidate for honors in biology must meet all requirements of the major, maintain a high grade point average, complete an independent research project under the direction of a departmental faculty member, prepare an acceptable thesis, and pass a final comprehensive examination. The criteria for admission into the honors program are outlined in material available from the department.

MINOR IN BIOLOGY

The requirements for a minor in Biology are:

1. BIO 101 and 102 Introductory Biology
2. Any four of the following. At least one of the four must be at the 200 level:

- BIO 104 Biodiversity or BIO 110 Intoduction to Plant Biology
- BIO 109 Microbiology
- BIO 118 Genetics
- BIO 137 Cell Biology
- BIO 216 Ecology
- BIO 240 Physiology

INTEGRATED B.A./M.A. DEGREE PROGRAM

This plan, which enables students to complete the requirements for the bachelor of arts and the master of arts degrees within five years, is intended for students who develop sharply focused research interests. Undergraduates who will have completed the chemistry, mathematics, and physics requirements for the biology major by the end of their third year may apply for admission to this program during the second semester of their third year. Students accepted into the program will be advised individually by a committee of faculty members who will set forth the specific course requirements and research expectations for the master's portion of the program. Courses taken at the 200 level or higher may be counted toward the course requirements for both the bachelor's degree, which will normally be awarded after the fourth year, and the master's degree, normally awarded after the fifth year. A successful preliminary examination, submission of a thesis, and a final examination based on the contents of the thesis are required of all master's degree recipients. Specific requirements of the program and application procedures are available in the department office.

GRADUATE PROGRAMS

The department offers course work leading to the master of arts and doctor of philosophy degrees in biology. The department has three foci for graduate emphasis: molecular and cell biology, neurobiology, or ecology and evolution.

It will be assumed that all students admitted to the department's graduate program will be working toward the doctoral degree, but it may be appropriate for some students to complete the master's program before beginning doctoral work. Students applying for admission to either program must demonstrate adequate preparation in the basic sciences, an overall undergraduate record of B or better, and satisfactory scores on the Graduate Record Examination. Tuition scholarships and research and teaching assistantships are available to qualified students. Further information can be obtained from the department chair.

MASTER OF ARTS

A candidate for the master of arts degree must complete three to four semesters of academic work, pass a qualifying examination before the end of the second semester in residence, acquire teaching and research experience, and defend an acceptable thesis. Specific requirements for individual students will be determined by the faculty advisors.

■ DOCTOR OF PHILOSOPHY

Qualified students may be admitted into the doctoral program. The minimal requirements for a candidate for the doctoral degree are determined by the University and can be found in the Graduate School section of this catalog. Additional requirements and the details of individual programs will be determined by the student's advisory committee.

■ COURSES OFFERED FOR SCIENCE MAJORS AND OTHER QUALIFIED STUDENTS

101 INTRODUCTION TO BIOLOGY I/LECTURE, LABORATORY

102 INTRODUCTION TO BIOLOGY II/LECTURE, LABORATORY

A two-semester course designed with three goals in mind: (1) to provide students with an understanding of the unifying themes in modern biology, (2) to introduce students to the diversity of life forms at all levels of organization, and (3) to illustrate the methods and modes of scientific inquiry in the biological sciences. The emphasis is on organismic and evolutionary biology during one semester and on cellular and molecular biology during the other semester. Both semesters must be completed before a student can enroll in advanced courses offered to satisfy the requirements of the biology major. Qualified students must obtain approval from the chair of the department to have this requirement waived. Staff/Offered every semester

103 BIOGEOGRAPHY/LECTURE

Past and present geographical distributions of plant and animal species are considered in relation to continental drift, species interactions, dispersal strategies, biological evolution, and human activity. Island biogeography and the biogeography of tropical vascular plants are emphasized. Prerequisites: Biology 101 and 102. Mr. Herwitz/Offered every year

104 BIODIVERSITY/LECTURE, LABORATORY

This course gives students an opportunity to explore the diversity of life on earth. Topics include biodiversity through the ages, human biodiversity, changing environments and problems in biodiversity. The course includes lectures, laboratories, paper assignments and field trips. Prerequisites: Biology 101 and 102 Mr. Johansen/Offered every year

105 MOLECULAR BIOLOGY/LECTURE

An examination of the molecular basis of life. Topics include the biological macromolecules (DNA, RNA, proteins), DNA replication, the mechanism of protein synthesis, the genetic code, gene regulation, introns, and other complexities of eukaryotic genes and the origin of life. Prerequisites: Biology 101 and 102. Chemistry 101/102 recommended. Staff/Offered every year

109 MICROBIOLOGY/LECTURE, LABORATORY

An introduction to the fundamental principles and methods of microbiology with applications to the biomedical and environmental sciences. Emphasis is on bacteriology. Prerequisites: Biology 101 and 102 and Chemistry 102, or permission of instructor. Mr. Reynolds/Offered every year

110 INTRODUCTION TO PLANT BIOLOGY/LECTURE, LABORATORY

Structure, development, and evolutionary relationships of plants are examined along with plant functions such as photosynthesis, communication, and transport. Aspects of the molecular biology of plants, plant ecology, genetics, hormones, and nutrition are discussed. The diversity of plants is reviewed, as is their role in symbiosis and genetic engineering. Protists, fungi, and bacteria are considered in relation to plants. Prerequisites: Biology 101 and 102. Mr. Ahmadjian/Offered every year

114 MARINE BIOLOGY/LECTURE, FIELD TRIPS

This course is an introduction to the diversity and ecology of life in the oceans. Studies of basic physical oceanography and marine ecology precede studies of marine ecosystems such as salt marshes, kelp forests, rocky shores, plankton, and deep seas. Also included are the relationships of marine biology to the welfare of mankind. Prerequisites: Biology 101 and 102. Mr. Johansen/Offered every year

118 GENETICS/LECTURE, DISCUSSION

A basic course in genetics covering Mendelian analyses; the molecular nature and function of the gene; gene and chromosome mutation; genetic mapping in eukaryotes and prokaryotes; and population genetics. Prior exposure to college-level chemistry is recommended. Prerequisites: Biology 101 and 102. Mr. Lyerla/ Offered every year

135 THE PARADOX OF ANIMAL SOCIALITY/LECTURE, DISCUSSION

Refer to course description under Psychology 135. Prerequisites: Biology 101 and 102. Mr. Thompson/Offered every year

137 CELL BIOLOGY/LECTURE, LABORATORY

The cell as a structural and functional unit is studied. Included are introductions to the physiochemical properties and metabolic roles of molecules and macromolecules of cellular origin, and discussion of the roles of the nucleus, cytoplasm, and cell membranes in the regulation of cell metabolism. Prerequisites: Biology 101 and 102. Mr. Curtis/Offered every year

140 NEUROSCIENCE I/LECTURE, LABORATORY, DISCUSSION

The first of a two-course introduction to invertebrate and vertebrate nervous systems. Basic anatomy, physiology and chemistry, and the function of sensory and motor systems are covered. Emphasis is on classical and current research and on neuroscience as a complex of research problems requiring integrated anatomical, electrophysiological, chemical, and behavioral approaches. Guest lecturers include neuroscientists from the Biology, Chemistry, Physics, and Psychology Departments at Clark and from neighboring institutions. Prerequisites: Biology 101, 102, and Psychology 101. Ms. Kennedy, Mr. Schoenfeld/Offered every year

141 NEUROSCIENCE II/LECTURE, DISCUSSION

The second of a two-course introduction to nervous systems. Surveys current problems in neuroscience including theories of brain function. Emphasis is on the underlying physiological mechanisms that mediate behavior, i.e. motivation, emotion, learning, and memory. The course is constructed on a systems approach designed to demonstrate the complex and interdependent relationship of the body and brain to behavior. Prerequisite: Biology 140. Mr. Schoenfeld, Ms. Kennedy/ Offered every year

170 NUTRITION AND METABOLISM/LECTURE

Human health is studied from the perspective of the chemistry of biological regulatory processes. The basic components of food are presented, and their biological function of maintaining human growth and vitality is studied. The role of food additives and cultural variations in diet in regard to pathology is discussed. Prerequisites: Biology 101, 102, Chemistry 101, and 102. Mr. Brink/Offered every other year

183 LANGUAGE OF BIOLOGY/LECTURE

Concerned with the study of Latin and Greek roots and affixes that constitute biological terms in disciplines such as paleontology, taxonomy, and anatomy. The course also surveys the history of biology through its language: when certain concrete and abstract terms entered the language, who invented them, how their meanings may have changed, and possible alternate contemporary definitions. Prerequisites: Biology 101 and 102. Mr. Blinderman/Offered periodically

200 LABORATORY IN ETHOLOGY

Refer to course description under Psychology 200. Prerequisites: Biology 101 and 102. Mr. Thompson/Offered periodically

201 OCEAN ISLANDS: GEOLOGY AND ECOLOGY/LECTURE, FIELD TRIP

A study of the biology and geology of islands, with special emphasis on Bermuda. The course includes lectures, projects, and a one-week field trip to the Bermuda Biological Station during the University fall or spring vacation. Prerequisites (or corequisites): Biology 101 and 102, and Geology 100 or Biology 110, Biology 114, Biology 116, Biology 216, or Biology 103/Geography 112. A laboratory fee of approximately $700 is required. Mr. Herwitz, Mr. Johansen, Mr. Livdahl/ Offered every year

204 WATERSHED ECOLOGY/LECTURE, DISCUSSION

Advanced seminar examining current scientific literature on the biogeochemistry of contrasting forested ecosystems. Topics include the inputs, outputs, and internal transfers of energy and nutrients in north temperate hardwood forests, tropical rainforests, cloud forests, eucalypt woodlands, and baldcypress swamps. The Hubbard Brook ecosystem study is considered in detail. Includes a field trip to the Hubbard Brook experimental watershed in the White Mountains. Prerequisites: Biology 101 and 102. Mr. Herwitz/Offered every other year

211 SYMBIOSIS AND PARASITISM/ LECTURE, DISCUSSION

Symbiotic and parasitic associations including animals, plants, protists, fungi, and bacteria are studied. The descriptive and functional aspects of each type of association are considered along with the experimental techniques that are used to study interrelationships between symbionts. Prerequisites: Biology 101 and 102. Mr. Ahmadjian/Offered every other year

216 ECOLOGY/LECTURE

Provides an overview of ecology as a scientific discipline. The primary emphasis is on efforts to explain and predict the distribution and abundance of organisms, how ecological communities are composed, and why they vary in time and space. Prerequisites: one or more courses from the organismal biology group and one college-level math course. Mr. Livdahl/ Offered every year

220 POPULATION BIOLOGY/LECTURE

Examines the properties that exist only at the population level, including schedules for birth and death, population growth patterns, spatial variation in abundance, genetic variation, and the factors that modify these features over time. Prerequisites: Biology 118 and 216 or permission of instructor. Mr. Livdahl/Offered every other year

221 EMBRYOLOGY AND DEVELOPMENT/ LECTURE, LABORATORY

Considers the fundamentals of development with primary emphasis on the vertebrate embryo. Prerequisites: Biology 101, 102, and permission of instructor. Mr. Lyerla/Offered every other year

223 TOPICS IN MARINE BIOLOGY/LECTURE, SEMINAR

This course provides an opportunity to delve in depth into selected topics in marine biology. Areas of study fall under the headings of biological oceanography, marine ecology, marine coastal and open ocean communities, and relationships between humans and the sea. Limited to 15 students. Prerequisite: Biology 114. Mr. Johansen/Offered periodically

224 ENDOCRINOLOGY/LECTURE

The chemistry and biological actions of hormones are discussed with emphasis on the mammalian endocrine system. Integration of studies of the ultrastructure and biochemistry of endocrine glands and their target tissues are a major focus of this course. Prerequisites: Biology 101 and 102. Mr. Curtis/Offered every year

225 LIGHT AND ELECTRON MICROSCOPY/LECTURE,LABORATORY

An introduction to the principles of electron optics, use of the electron microscope, preparation of specimens, and the techniques of both light and electron microscopy applicable to biological investigation. Prerequisites: Biology 101, 102, and 137. Mr. Curtis/Offered periodically

226 RESEARCH IN PERCEPTION/ LABORATORY, DISCUSSION

Refer to course description under Psychology 226. Prerequisites: Biology 101 and 102. Ms. Wiser/Offered periodically

227 SOMATIC CELL GENETICS/ LECTURE, LABORATORY

An introduction to cell culture methods through analyses of mouse X human somatic cell hybrids. Topics include: maintenance of senescent and immortal cell lines, cell culture media and their preparation, hybridization, cloning, and biochemical and chromosomal characterization of hybrid lines. Prerequisites: Biology 109, 118, and permission of instructor. Mr. Lyerla/Offered periodically

228 MOLECULAR GENETICS/LECTURE, SEMINAR

Explores recent discoveries in the molecular genetics of prokaryotes and eukaryotes, with emphasis on new findings from recombinant DNA technology and DNA sequencing. Topics include: protein synthesis, RNA transcription, gene regulation, repetitive DNA, gene cloning, split genes, gene families, transposable elements, oncogenes, and antibody gene rearrangement. Intended primarily for seniors and graduate students. Prerequisite: Biology 118 or 272, or permission of instructor. Mr. Thurlow/Offered every other year

231 RECOMBINANT DNA/LECTURE, LABORATORY

An introduction to gene cloning techniques.

Students clone Escherichia coli DNA in a plasmid vector; specific experiments include: DNA purification, restriction enzyme digestion, agarose gel electrophoresis, DNA ligation, bacterial transformation, genetic characterization of recombinants, restriction mapping, and DNA sequencing. Two laboratory periods per week. Prerequisites: Biology 118 in addition to Biology 109 or 271. Staff/Offered every other year

232 TOPICS IN MICROBIOLOGY AND PUBLIC HEALTH/LECTURE, DISCUSSION

Theme and content vary. Offered for graduate students and for undergraduates who have completed a course in microbiology and one or more years of college-level chemistry. Prerequisites: Biology 109, Chemistry 102, and permission of instructor. Mr. Reynolds/ Offered periodically

240 PHYSIOLOGY/LECTURE, LABORATORY

An introduction to the principles underlying physiological functions common to all living animals. Covers the subcellular, cellular, and organ levels of organization and places a primary emphasis on the integrative processes whereby all of the diverse organs and systems are oriented to the performance of the complete organism. Prerequisites: Biology 137. Enrollment is normally restricted to students in their third or fourth year. Ms. Kennedy/ Offered every year

241 RISK ASSESSMENT IN ENVIRONMENTAL TOXICOLOGY/LECTURE

Focus is on the assessment of hazardous properties of toxic chemicals in the environment and development of public health policy. The first part covers the principles of absorption, distribution, excretion, and toxic action of chemicals on humans; animal testing; and human epidemiology. The second part covers assessment of public health risks on the basis of animal and human test results, development of standards for air and water contaminants, and uncertainty in regulating hazardous chemicals. Prerequisites: Biology 101, 102, and permission of instructor. Ms. Brown/ Offered every year

247 NEUROPHYSIOLOGY/SEMINAR

Discussion of selected readings from classical and current research papers and books on principles and mechanisms of neuronal function. Emphasis is on understanding and critically evaluating research that has been done, understanding the significance of the work in a particular reading to the field as a whole, and recognizing appropriate directions for future research in each problem area. Prerequisites: Biology 140 or 240. Ms. Kennedy/ Offered every other year

252 SEMINAR IN MYCOLOGY

A detailed, but broad, treatment of fungi with discussion of the major groups of fungi. Topics covered include classification genetics, nutrition, biochemistry, molecular biology, secondary products, symbiosis, and ecology of fungi. Prerequisite: permission of instructor. Mr. Ahmadjian/Offered periodically

266 BIOMOLECULAR NMR

Refer to course description under Chemistry 266. Mr. Mierke/Offered every other year

271 BIOCHEMISTRY I/LECTURE, LABORATORY

272 BIOCHEMISTRY II/LECTURE

This two-semester course provides a comprehensive and up-to-date survey of the field of biochemistry. The first semester covers cell metabolism and protein structure and function; the second semester deals with nucleic acid and protein metabolism and other topics. A laboratory component for the first semester acquaints students with methods and instrumentation used in biochemical research. Prerequisites: Biology 101, 102, and Chemistry 132. Mr. Brink, Mr. Nelson, Mr. Thurlow/ Offered every year

273 NEUROCHEMISTRY/LECTURE, DISCUSSION

Metabolic aspects of brain amines and biopolymers are considered in relation to neural function. Effects of drugs on memory processes, pain, and emotion are discussed in terms of biochemical mechanisms. Prerequisites: Biology 101 and 102, and Chemistry 132 or permission of instructor, or Biology 141. Mr. Brink/Offered every other year

277 BIOCHEMISTRY OF DISEASE/ LECTURE, DISCUSSION

The course considers biochemical systems that are perturbed in metabolic regulatory processes as in cardiovascular disease, hormonal imbalance (diabetes), and genetic defects (Tay-Sachs disease). The effects of environmental influences represented by drug and nutrient components are also addressed. Prerequisites: Biology 101 and 102, and Chemistry 132 or permission of instructor. Mr. Brink/Offered every other year

278 PHARMACOLOGY

This course is for students who wish to know more about the biological actions of therapeutic drugs on various tissues and organisms. Among the agents surveyed are those that affect the brain, kidney, pathogenic organisms, and oncologic processes. The detailed actions of several important drugs such as penicillin are analyzed for specific pharmacological effects and general biotic effects in the environment. Mr. Brink/Offered periodically

280 BIOSTATISTICS AND COMPUTER APPLICATIONS/LECTURE

Provides a background in the basic methods of data analysis for biologists, applications of mathematics to the description of biological phenomena, and the generation of testable hypotheses from models of biological processes. Prerequisites: one or more biology courses beyond Biology 101 and 102. Mr. Livdahl/ Offered every year

281 ANIMAL SOCIAL LIFE/SEMINAR

Refer to course description under Psychology 281. Prerequisite: permission. Mr. Thompson/ Offered every year

293 MOLECULAR NEUROPHARMACOLOGY/ LECTURE, DISCUSSION

This course is designed to provide students with the basic knowledge of the action of drugs that influence the nervous system. The molecular, psychological, and behavioral effects of the different classes of drugs such as opiates, stimulants, and tranquilizers are presented. Topics include: receptor binding kinetics and mechanisms; drug absorption, distribution, and metabolism; molecular biology and cloning of receptors; and general pharmacological principles underlying the design and site-specific action of drugs. Prerequisite: Biology 141 or permission of the instructor. (Enrollment is limited.) Mr. Brink/ Offered periodically

295 NEUROENDOCRINE MECHANISMS OF BEHAVIOR/ LECTURE, SEMINAR

A comprehensive examination of how neuroendocrine systems influence mammalian behavior. Initially, anatomical and physiological bases for interaction of the nervous and endocrine systems and the various classes of chemical signaling and major neuroendocrine pathways are reviewed. Neuroendocrine control of behaviors such as feeding, drinking, reproduction, and learning then are discussed with emphasis on how different classes of neuroendocrine signals individually and interactively influence specific behaviors. Application of new approaches to the study of the neuroendocrinology of behavior is included. Prerequisite: Biology 141 or permission of instructor. Staff/Offered every year

299 SEC. 0 DIRECTED RESEARCH/ LABORATORY

An advanced independent study for undergraduates of an approved topic under the direction of a department member. Prerequisite: permission of instructor. Staff/Offered every year

299 SEC. 1 DIRECTED READINGS/DISCUSSION

Advanced readings on an approved topic under the direction of a department member. Prerequisite: permission of instructor. Staff/ Offered every year

299 SEC. 8 HONORS IN BIOLOGY

Readings and research for students in the honors program. Pass/no record only. Staff/ Offered every year

300 READINGS AND RESEARCH IN BIOLOGY

Offered for variable credit. Staff/Offered every year

311 GRADUATE RESEARCH SYMPOSIUM

Graduate students organize and present a public symposium composed of individual research presentations. This course may be repeated for credit. Mr. Livdahl/Offered every year

352 GRADUATE SEMINAR IN MYCOLOGY

A detailed but broad treatment of fungi with discussion of the major groups of fungi. Topics covered include: classification, genetics, nutrition, biochemistry, molecular biology, secondary products, symbiosis, and ecology of fungi. Prerequisite: permission of instructor. Mr. Ahmadjian/Offered periodically

353 GRADUATE SEMINAR IN MOLECULAR BACTERIOLOGY/SEMINAR

Recent papers on the molecular biology of bacteria are discussed, with occasional digressions into eukaryotes. The emphasis is on the molecular mechanisms of life, especially gene expression and regulation. Students also report on their own research results. Primarily for graduate students doing research in this area; may be repeated for credit. Prerequisite: permission of instructor. Staff/Offered periodically

397 MASTER'S THESIS

Offered for variable credit. Staff/Offered every year

398 DOCTORAL DISSERTATION

Offered for variable credit. Staff/Offered every year

Business/Management

See Management

Chemistry

The Gustaf H. Carlson School of Chemistry

DEPARTMENT FACULTY

Donald J. Nelson, Ph.D., chair: biochemistry, bioinorganic

Daeg S. Brenner, Ph.D.: nuclear

Karen L. Erickson, Ph.D.: organic, natural products

Frederick T. Greenaway, Ph.D.: bioinorganic, enzymology

Alan A. Jones, Ph.D.: polymer, physical

Dale F. Mierke, Ph.D.: biomolecular structure, magnetic resonance, spectroscopy

David L. Thurlow, Ph.D.: molecular biology

Edward N. Trachtenberg, Ph.D.: organic

Mark M. Turnbull, Ph.D.: organometallic, magnetochemistry

Wen-Yang Wen, Ph.D.: physical, gas-polymer interactions

RESEARCH FACULTY

Paul T. Inglefield, Ph.D.

Stuart L. Licht, Ph.D.

ADJUNCT FACULTY

John J. Brink, Ph.D.

Halina S. Brown, Ph.D.

Christopher P. Landee, Ph.D.

Timothy A. Lyerla, Ph.D.

AFFILIATE FACULTY

Larry W. Hardy, Ph.D.

David Kupfer, Ph.D.

George E. Wright, Ph.D.

EMERITUS

Harry C. Allen Jr., Ph.D.

UNDERGRADUATE PROGRAM

The Chemistry Department offers an undergraduate program that includes a major and a minor, with the following goals in mind:

1. to provide a variety of course offerings that are consistent with the accreditation requirements of the American Chemical Society;
2. to offer a program that will prepare students for graduate work in chemistry and related fields;
3. to provide a strong scientific background for students planning careers in health-related professions;
4. to encourage students not majoring in science to obtain an overview of the impact of science on society.

The requirements for the chemistry major are two courses in calculus (Math 120 and 121, or 124 and 125 or, alternatively, Math 110, 111, and 112), two courses in physics (Physics 110, and 111 or preferably 112), and eleven courses in chemistry and related fields. These courses must include:

COURSE	NUMBER
Introductory Chemistry I	*101*
Introductory Chemistry II	*102*
Organic Chemistry I	*131*
Organic Chemistry II	*132*
Environmental Chemistry	*142*
Bioanalytical Chemistry	*144*
Instrumental Analysis	*246*
Inorganic Chemistry	*250*
Physical Chemistry I	*260*
Physical Chemistry II or	*262*
Biophysical Chemistry	*264*

The remaining two-course requirement is normally satisfied by advanced chemistry courses, one of which may be Chemistry 299, sec. 2, Directed Research, or Chemistry 299, sec. 8, Honors. On rare occasions, with permission from the department, the student may substitute an advanced-level course in biochemistry, computer science, mathematics, physics, or biology.

Students planning graduate study in chemistry are strongly urged to take Physics 112 rather than Physics 111. In addition to the stated requirements, it is recommended that students take Chemistry 360, 231, and/or advanced mathematics, physics, and biochemistry courses, depending on the area of interest. Computer science courses also are recommended. All chemistry majors are encouraged to undertake independent research projects either as a candidate for honors (Chemistry 299, sec. 8) or in a directed research course (Chemistry 299, sec. 2) and may do so after completing Chemistry 102.

A student may elect as his/her first course in chemistry: Chemistry 10, 70, 72, 90, 101, 102, or 131. Science majors normally begin with Chemistry 101. The decision to start with Chemistry 102 or 131 (accelerating options) must be made in consultation with the department chair and may require taking a placement examination offered at the beginning of the academic year.

Students who fulfill the normal requirements will have their degrees accredited by the American Chemical Society.

The department publishes an undergraduate handbook, Chemistry at Clark, which provides additional information. Copies are available at the department office.

■ HONORS PROGRAM

An honors degree program is offered for highly qualified majors. Students who want to enter this program must apply in writing to the department chair prior to the beginning of the senior year. Participants are required to engage in an independent research project, participate in the department seminar program, and pass a set of comprehensive examinations. Further information about the program can be obtained from the department chair or the undergraduate handbook.

■ MINOR IN CHEMISTRY

The requirements for a minor in Chemistry are:

CHEM 101 and 102 Introductory Chemistry

CHEM 131 and 132 Organic Chemistry

Plus two advanced courses in Chemistry or Biochemistry, neither of which may be used to satisfy a student's major requirements.

FIVE YEAR BA/MA PROGRAM

The department offers a M.A. degree in Chemistry (focusing on Biochemistry, Organic Chemistry, Environmental Chemistry, Physical Chemistry, Inorganic Chemistry, or Analytical Chemistry) to undergraduate chemistry or biochemistry majors who complete an additional four courses and submit an acceptable thesis based on original research. Details of the program are available from the department office.

GRADUATE PROGRAM

The department offers programs leading to the degrees of master of arts and doctor of philosophy with specialization in various fields of chemistry. Emphasis is placed on tailoring programs to fit the specific needs and desires of the graduate student. To facilitate this goal, a committee of interested faculty works with each student to advise and review his/her progress in research work and, together with the student, defines the formal coursework requirements. Up to one year's equivalent of teaching apprenticeship will be required of all candidates for advanced degrees.

In addition to formal coursework, all students must pass qualifying examinations and submit and defend a research thesis. Ph.D. candidates must pass preliminary examinations and meet the department language requirement as well. For further details, students should consult the appropriate departmental publications.

Graduate scholarships, teaching assistantships, and research fellowships are available. Further information on these awards may be obtained from the department chair.

COURSES

010 TOPICS IN CONTEMPORARY CHEMISTRY/LECTURE, LABORATORY

This relatively nonmathematical course is designed for students majoring in social science or the humanities and is intended to develop a qualitative feeling about chemistry as it relates to the modern world. Approximately half the course is concerned with the development of modern chemical concepts; the remainder deals with current societal problems such as nuclear weapons and reactors, air and water quality, drugs, food additives, polymers, poisons, and others. In-class and final exams. Staff/Offered every year

070 PRESERVING GENOMES/ LECTURE, LABORATORY

This laboratory-oriented course is offered as a first-year seminar. DNA will be isolated from endangered, rare, or exotic organisms selected by the student. The DNA will be cut into fragments and "cloned" using techniques involving recombinant DNA. As a result, the genes from the organism will be preserved as a library of fragments of DNA that are maintained in a population of bacteria. The "genomic library" will be submitted to a national repository, thereby preserving the genes of the endangered species. There are no prerequisites; students are invited to share in the excitement of preserving genes that might otherwise be lost forever. Laboratory reports, in class and final exams. Mr. Thurlow/Offered every other year

072 RESEARCH! THE EXCITEMENT OF CHEMISTRY/LECTURE, LABORATORY

This course introduces students to the excitement of the research experience. Chemistry is actively searching for new materials to benefit society, including those to power electric cars, create new solar cells or act as environmental sensors. Students will probe the mysteries of one of these materials by investigating never-before measured physical/chemical properties of that compound (such as battery properties or melting point, or solubility properties, etc.), and culminate with the preparation of a research article co-authored by each of the students. Participatory learning includes a literature search, chemical laws, structuring a hypothesis, determining an optimal experimental procedure, experimentation, data interpretation, and write-up. Although the course is relatively non-mathematical, it does require solid skills in algebra. Laboratory reports, in class and final exams. Mr. Licht/Offered every other year

090 HISTORY OF SCIENCE/LECTURE

Traces the development of scientific thought, concepts, and methods from the classical work (Egyptian, Greek, Roman), through the Middle Ages and the European Renaissance to the modern work. Historical milestones leading to the development of the "scientific method" are discussed in detail. The course concludes with an examination of the impact of chemical technology on modern society. In-class and final exams. Mr. Nelson/Offered every year

101 INTRODUCTORY CHEMISTRY I/LECTURE, LABORATORY

Designed to meet the needs of science majors and the premed program as well as those seeking a rigorous introduction to chemistry as part of their liberal arts education. Introduces fundamental chemical concepts and applies them to a discussion of structure, bonding, and reactivity of molecules. A knowledge of high school algebra is necessary; high school chemistry and physics, although helpful, are not required. The laboratory teaches techniques of chemical experimentation and methods of chemical analysis. In-class and final exams, laboratory reports, and quizzes. Staff/Offered every semester

102 INTRODUCTORY CHEMISTRY II/LECTURE, LABORATORY

Continues Chemistry 101 with a discussion of thermodynamics, equilibrium theory, kinetics, electrochemistry, and the application of such theories to studies of structure and reactivity of molecules. The laboratory studies experimental techniques related to the lecture material. Prerequisite: Chemistry 101 or advanced placement. In-class and final exams, laboratory reports, and quizzes. Staff/Offered every semester

131 ORGANIC CHEMISTRY I/LECTURE, LABORATORY

Discusses the chemistry of carbon and its compounds. The structures and reactions of related classes of organic molecules are systematically studied with emphasis on reaction mechanisms and structural factors that affect reactivity. The laboratory concentrates on the preparation and physical, spectral, and chemical properties of these classes of compounds. Prerequisite: Chemistry 102 or advanced placement. In-class and final exams, laboratory reports. Staff/Offered every semester

132 ORGANIC CHEMISTRY II/LECTURE, LABORATORY

Continues Chemistry 131 by studying more complex molecules and reaction mechanisms. Prerequisite: Chemistry 131. In-class and final exams, laboratory reports. Staff/Offered every semester

142 ENVIRONMENTAL CHEMISTRY/ LECTURE, LABORATORY

Focuses on chemistry related to environmental problems, with emphasis on aquatic chemistry and aquatic and air pollution. Equilibrium theory is developed as a model for aquatic chemistry, and chemical analyses of local aquatic systems are conducted in the laboratory according to Environmental Protection Agency procedures. Prerequisite: Chemistry 102. In-class and final exams, laboratory reports. Mr. Licht/Offered every year

144 BIOANALYTICAL CHEMISTRY/ LECTURE, LABORATORY

This laboratory-oriented course presents both theoretical and practical aspects of quantitative analysis in biological systems. Topics include: equilibrium theory, chromatography, electrophoresis, immunochemistry, ultracentrifugation, absorption and fluorescence, NMR, enzyme analyses, and radioactivity counting procedures. Prerequisite: Chemistry 132. In-class and final exams, laboratory reports. Mr. Nelson/Offered every other year

231 ADVANCED ORGANIC CHEMISTRY/LECTURE

Provides a framework for students who wish to pursue an interest in organic chemistry beyond the level covered in Chemistry 131 and 132 by bridging the gap between material in standard elementary organic texts and the original literature. Advanced topics selected from structure, synthesis, and reaction mechanisms may include stereochemistry and asymmetric synthesis; ionic, free radical, carbenoid, and concerted reaction mechanisms; structure determination by modern spectroscopic and degradative methods. Prerequisite: Chemistry 132. Staff/Offered every year

235 NATURAL PRODUCTS/ LECTURE

The structure, synthesis, biosynthesis, and chemistry of selected secondary metabolites including steroids, terpenoids, alkaloids, and actogenins of both terrestrial and marine origin are discussed. Biogenetic theory is used extensively to emphasize the simplicity within the complexity of these natural products. Prerequisite: Chemistry 132. Ms. Erickson/ Offered every other year

236 ORGANOMETALLIC CHEMISTRY/LECTURE

This course covers material related to compounds containing one or more covalent metal-carbon bonds. The material progresses from the traditional organometallics such as Grignards and cuprates through the transition metal- and main group-complexes. Emphasis is placed on the properties of organometallic compounds and mechanisms of their formation and subsequent reactions. Because of the recent development of the field, use of the primary literature is stressed. A comparison of traditional organic and inorganic chemistry is developed through this intermediate field. Prerequisites: Chemistry 132, 250, or permission of instructor. Mr. Turnbull/Offered every other year

242 NUCLEAR SCIENCE/LECTURE, LABORATORY

This course covers the fundamentals of nuclear chemistry and physics: production, isolation, identification, structure, and measurement of radioactive atoms. Prerequisite: permission of instructor. Mr. Brenner/Offered periodically

246 INSTRUMENTAL ANALYSIS/ LECTURE, LABORATORY

Concentrates on instrumental techniques of analytical chemistry from both theoretical and practical points of view. Topics include electrochemistry, various types of spectroscopic analysis, chromatography, and electrophoresis. In the laboratory, these techniques are used in the analysis of chemical samples. Prerequisite: Chemistry 142 or 144. In-class and final exams, laboratory reports. Mr. Licht/Offered every year

250 INORGANIC CHEMISTRY/ LECTURE, LABORATORY

Deals with theories of structure and bonding and their utility in explaining the chemistry of inorganic substances. Topics include: molecular orbital, valence bond, and crystal field theories of bonding and examples of the use of these theories in explaining the structure and reactivities of inorganic molecules; acid base theory; spectroscopic methods; and kinetics. Emphasis is placed on the interpretation of structure and reactivity in terms of basic molecular and atomic parameters. Prerequisite: Chemistry 142 or 144. Prerequisite or corequisite: Chemistry 132. In-class and final exams, laboratory reports. Mr. Greenaway/Offered every year

252 BIOINORGANIC CHEMISTRY/LECTURE

This course discusses the chemistry of metals in biological systems and models of these systems. There is a lengthy introduction to general principles and theories of inorganic chemistry and of metal ion and drug transport in biological systems. This is followed by an introduction to physical techniques used in studying metalloproteins. The major part of the course is a survey of the application of these principles and methods by way of a survey of metallobiological systems. Prerequisite: permission of instructor. Mr. Greenaway/ Offered every other year

260 PHYSICAL CHEMISTRY/ LECTURE, LABORATORY

Covers the principles of physical chemistry as applied to gases, liquids, solids, and solutions. Much of the course is an introduction to the topic of chemical thermodynamics. The laboratory includes experiments in physical chemistry, the development of techniques of measurement, and technical report writing. Prerequisites: Mathematics 120 and Chemistry 102. Prerequisite or corequisite: Chemistry 132. In-class and final exams, laboratory reports. Mr. Wen/Offered every year

262 PHYSICAL CHEMISTRY II/ LECTURE, LABORATORY

The topics covered in this continued discussion of physical chemistry are solutions of the Schrodinger equation for simple systems, atomic and molecular spectroscopy, magnetic resonance, solid state and X-ray diffraction, statistical thermodynamics, and chemical kinetics. In-class and final exams, laboratory reports. Prerequisite: Chemistry 260. Mr. Wen/ Offered every year

264 BIOPHYSICAL CHEMISTRY/ LECTURE, LABORATORY

Refer to course description under Biochemistry 264. Mr. Nelson/Offered every other year

265 ELECTRON PARAMAGNETIC RESONANCE SPECTROSCOPY/ LECTURE

This course is designed as an introduction to the theory and application of EPR as a probe of structure and reactivity. Theoretical concepts are discussed in a manner that does not require a knowledge of quantum mechanics, although a basic knowledge of chemistry is required. The course also is designed to be suitable for biology and physics majors. Prerequisite: permission of instructor.
Mr. Greenaway/Offered periodically

266 BIOMOLECULAR NMR/ LECTURE

This course covers the modern use of NMR for the study of structure and dynamic properties of biological molecules in solution. The course begins with the standard two-dimensional techniques (NOESY, COSY, TOCSY) for assignment and determination of conformation. Additional topics include three- and four-dimensional techniques, simplification of proton spectra using hetero-nuclear filtering, solvent orientation about proteins, dynamics and flexibility using relaxation rates, effect of environment on conformation, and the binding of small molecules to large proteins. A basic knowledge of NMR (e.g. one-dimensional spectra, coupling constants) is assumed. Mr. Mierke/Offered every other year

271 BIOCHEMISTRY I/LECTURE, LABORATORY

272 BIOCHEMISTRY II/LECTURE

Refer to course descriptions under Biochemistry 271 and 272. Staff/Offered every year

275 PROTEIN CHEMISTRY/ LECTURE

Refer to course description under Biochemistry 275. Mr. Nelson/Offered every other yea

276 STRUCTURE AND FUNCTION OF NUCLEIC ACIDS/LECTURE

This course discusses principles of nucleic aci structure including: types of helices, primary structure, secondary structure, and supercoiling. In the second half of the course, students discuss papers relating the principles of structure to a particular function such as storage, expression of information, catalysis, and evolution of the genetic code. Prerequisite: Chemistry 272. Mr. Thurlow/Offered every other year

280 POLYMER SCIENCE/LECTURE

The physical chemistry of synthetic polymers is presented including discussion of kinetic mechanisms of polymerization, molecular weight distributions, unperturbed dimensions structure and conformation, viscosity, and dynamic properties. Specific experimental methods useful in polymer chemistry such as osmotic pressure, light scattering, gel permeation chromatography, viscoelastic response, nuclear magnetic resonance, and dielectric response also are reviewed. Prerequisite: Chemistry 262 or 264. Mr. Jones/Offered every other year

289 RESEARCH METHODS/ LECTURE, LABORATORY

This course deals with the application of analytical tools widely used in the laboratory.

Topics include NMR, EPR, IR, Raman, UV- isible, mass, and fluorescence spectroscopy, hromatography, electro- hemistry, and other techniques. Emphasis is laced on giving the student practical knowl- dge for data interpretation and instrument peration. Quarter-credit courses lasting 4-5 veeks are offered periodically. Prerequisite: Chemistry 262 or 264, or permission. Staff/ Different topics offered every semester

99 SEC. 2 DIRECTED RESEARCH/ ABORATORY, DISCUSSION

ndividual investigations that involve labora- ory and literature research. Offered for vari- ble credit. Prerequisite: permission. taff/Offered every semester

99 SEC. 8 HONORS COURSE/ ABORATORY, DISCUSSION

rimarily for majors seeking departmental onors in chemistry. Involves a laboratory esearch project and participation in depart- nent seminars. Offered for variable credit. rerequisite: Permission of department chair. taff/Offered every semester

22 THERMODYNAMICS/LECTURE

Discusses applications of the three laws of hermodynamics to chemical systems. Ir. Wen/Offered periodically

23 STATISTICAL MECHANICS/ ECTURE

n this course, statistical mechanics is treated s a connecting bridge between molecular roperties and thermodynamics. In addition, heories of phase transitions, classical fluids, nd non-equilibrium systems are presented and iscussed. Mr. Wen/Offered every other year

333 SYNTHETIC ORGANIC CHEMISTRY/LECTURE

The synthesis of organic compounds is discussed. Topics include the scope and limitations of general methods, mechanistic aspects, and stereochemistry. Special emphasis is on the total synthesis of complex molecules from design of methods to execution. Three lectures per week. Prerequisite: Chemistry 231 or permission. Mr. Turnbull/Offered periodically

350 SEMINAR

Consists of reports on research and discussions of recently published work. Guest Lecturers, Staff, Graduate Students/Not offered for credit

360 QUANTUM CHEMISTRY/ LECTURE

Essentially an introduction to quantum mechanics. Covers elementary quantum-mechanical treatments of the structure of atoms and molecules. Prerequisite: Chemistry 262 or 264. Mr. Brenner/Offered every other year

361 MAGNETIC RESONANCE THEORY/LECTURE

The theory of static and time dependent interactions involved in magnetic resonance spectroscopy is presented. Energy states are defined on the basis of the time independent Hamiltonian and reflect symmetry. The time dependent terms in the Hamiltonian are used to develop descriptions for line shape collapse and relaxation. Mr. Jones/Offered every other year

380 RESEARCH CONFERENCE/ SEMINAR

Consists of informal reports of research work being done in the laboratory. Staff, Graduate Students/Offered every semester

399 GRADUATE SPECIAL TOPICS
Offered for variable credit.
Staff/Offered every semester

Communication, Culture and Society

PARTICIPATING FACULTY

Parminder Bhachu, Ph.D., Anthropology, Henry R. Luce Professor of Cultural Identities and Global Processes: urban anthropology, international migration and immigration, race, ethnicity, gender, culture, class and consumption, multiculturalism

Marcia Butzel, Ph.D., Foreign Languages and Literatures: film and cultural studies

Linda Dusman, D.M.A., Visual and Performing Arts: composer, theories of performance and music reception

Bradley Klein, Ph.D., Government and International Relations: Political theory, international relations, U.S. foreign policy, politics of the media

Sarah Michaels, Ph.D., Education: Relationships among language, discourse, culture and schooling; discourse analysis relating to classroom life and learning; teacher research

James Paul Gee, Ph.D., Education: Linguistics and education, sociolinguistics, sociocultural theories of literacy, discourse analysis, science and society, psycholinguistics

Fern Johnson, Ph.D., English: sociolinguistics, feminist linguistics, communication

Virginia Vaughan, Ph.D., English: Shakespeare, Renaissance drama, Renaissance poetry and prose

A NEW UNDERGRADUATE PROGRAM

The new Communication, Culture and Society major, still being established as the catalog was being published, is the systematic, interdisciplinary exploration of the ways in which contemporary culture is reproduced, transformed, and communicated through the media and represented through a variety of forms: languages as symbolic systems, literary works, historical writing, visual and graphic images, music, as well as popular discourse and culture. The CCS major integrates categories of inquiry often separated in traditional communication studies programs. In particular, the major requires students to experience theory and practice from the perspectives of both the social sciences and the humanities.

Because the CCS major will not be fully implemented until 1997-98, it will not be possible for students in the classes of 1996 and 1997 to complete the major. During the first year of implementation (1995-96) only two core courses will be offered: CCS 121: Shakespeare Recycled (See course description for English 121) and CCS 190: Communication, Culture and Society (See course description for English 190).

In CCS, students will explore a variety of modes of interpretation in order to understand how cultural representations have been constructed in the past and how their changing forms are currently disseminated. They learn to recognize the multiple voices (human and technological) that shape their self-representations and their constructions of others. They gain hands-on experience in the ways that various media work through at least two practicum-based courses and a well-designed internship.

CCS begins in the first year of a student's college experience with a topic-based interdisciplinary seminar, continues with a sophomore-level core course, and moves upwards through a series of more intense and integrative experiences, ending with an internship and capstone project. All students in the program will be given hands-on access to communications technologies through internships and through practicum-based courses. The emphasis will be in combining knowledge of media technology and methodology with a broad critical understanding of the cultural forces that work in and through them.

Students interested in communications fields who want a strong liberal arts background, as well as some hands on experiences in a variety of media, will be especially attracted to this program. Students interested in other careers, such as teaching at the elementary level, will also find CCS an attractive major.

For more information on the CCS major as it develops, contact Professor Virginia Vaughan in the English Department, (508) 793-7142.

Comparative Literature

PARTICIPATING FACULTY

Kenneth Hughes, Ph.D.: *program director:* eighteenth- to twentieth-century European literature, literary theory

María I. Acosta Cruz, Ph.D.: Baroque literatures, postmodernist narrative

Paul F. Burke Jr., Ph.D.: Greek and Latin language and literature, classical mythology, classical art and archaeology

Carol C. D'Lugo, Ph.D.: Spanish and Spanish-American narrative, literary theory

Marvin A. D'Lugo, Ph.D.: Hispanic literature and film, narrative theory

William Ferguson, Ph.D.: Spanish Golden Age literature, twentieth-century Hispanic literature

Everett Fox, Ph.D.: Jewish ritual and folklore, Classical Jewish thought

Hartmut Kaiser, Ph.D.: German language and literature, German romanticism, the fairy tale, relations between music and literature

Dorothy Kaufmann, Ph.D.: French feminism, literature and existentialism, French and Francophone cultural studies, European novel

Walter Schatzberg, Ph.D.: age of Goethe, German expressionism in literature and the arts, German cinema, relations of literature and science

Michael K. Spingler, Ph.D.: French theater and film, comparative drama, translation

Martine Voiret, Ph.D.: eighteenth-century French literature

ADJUNCT FACULTY

Martyn J. Bowden, Ph.D.

John Conron, Ph.D.

SunHee Kim Gertz, Ph.D.

Bernard Kaplan, Ph.D.

UNDERGRADUATE PROGRAM

THE MAJOR IN COMPARATIVE LITERATURE

Comparative Literature is a wide-ranging, multicultural program of studies in poetry, prose, drama, film, and related arts. Offered by the Department of Foreign Languages and Literatures, the program is by nature interdisciplinary and has strong ties with several other departments in the University. In addition to the courses offered by the department in comparative literature and literatures in foreign languages, the student is encouraged to take courses in English, humanistic geography, philosophy, and visual and performing arts. One of the special aspects of the program is the emphasis on developing a practical and critical approach to texts. This may take the form of play production, seminars in translation of lyric poetry and drama, and supervised work in contemporary critical theory (i.e., relations between text and performance, spectator positioning, and reader response).

MAJOR REQUIREMENTS

(1) Four courses beyond the intermediate level in one or more foreign languages. (An intermediate-level course in a second foreign language may be used in certain cases toward the fulfillment of the language course requirement.)

(2) Four courses in comparative literature, at least two of which should have a strong theoretical component.

(3) Five related courses, to be selected by the student in consultation with a faculty advisor.

COURSES

112 THE FAIRY TALES OF THE BROTHERS GRIMM/LECTURE, DISCUSSION

Refer to course description under German Literature Courses Conducted in English: German 112. Mr. Kaiser/Offered every other year

115 READING MODERN FICTION/LECTURE, DISCUSSION

An introduction to influential and provocative works of modern fiction, with emphasis on the short story and novella. We discuss the distinctive sensibility of modernism and the kinds of fictional language this sensibility has created. The course begins with Dostoyevsky's *Notes from Underground* and concludes with Milan Kundera's *The Unbearable Lightness of Being*. Ms. Kaufmann/Offered periodically

117 INTRODUCTION TO THE HEBREW BIBLE I: NARRATIVE AND LAW/LECTURE, DISCUSSION

Refer to course description under Jewish Studies 117. Mr. Fox/Offered every other year

118 INTRODUCTION TO THE HEBREW BIBLE II: PROPHECY AND POETRY/LECTURE, DISCUSSION

Refer to course description under Jewish Studies 118. Mr. Fox/Offered every other year

119 IMAGES OF ROME/LECTURE, DISCUSSION

This course will explore notions of the "Eternal City" as a mythic crossroads for the West, for Europeans, and for Italians, where conflicting perceptions of Rome are represented. By examining historical writing, literature, the visual arts, and film, the class will consider the ways these cultural texts embody and reflect larger conceptions of Western civilization. Ms. Butzel, Mr. Burke/Offered every other year

120 THE EPIC JOURNEY/LECTURE, DISCUSSION

A comparative and cross-cultural examination of the epic as a recurring literary form. Special attention is paid to the various forms and functions of the hero's journey. Epic journeys may or may not have goals that are clear to the hero; they may be wanderings in unknown parts of the physical world, or they may be representative of various types of spiritual striving and trial. Our task is to define and articulate the various types of epic voyage and to relate their differences and similarities to the values of the societies which gave rise to them. Included in the term's reading are selections (in English translation) from Homer's *Odyssey*, Vergil's *Aeneid*, Apollonius's *Argonautica* and Apuleius's *Ass*. Mr. Burke/Offered every other year

121 SURVEY OF INTERNATIONAL FILM MOVEMENTS/LECTURE, DISCUSSION

Refer to course description under Screen Studies 121. Mr. Benelli, Ms. Butzel/Offered every other year

123 THE MIDRASHIC TRADITION/ LECTURE, DISCUSSION

Refer to course description under Jewish Studies 123. Mr. Fox/Offered every other year

146 INTRODUCTION TO CINEMA IN SPAIN/LECTURE, DISCUSSION

Refer to course description under Spanish 146. Conducted in English. Mr. D'Lugo/ Offered every other year

147 STUDIES IN SPANISH CINEMA/ LECTURE, DISCUSSION

Refer to course description under Spanish 147. Conducted in English. Mr. D'Lugo/ Offered every other year

148 INTRODUCTION TO CINEMA IN LATIN AMERICA/LECTURE, DISCUSSION

Refer to course description under Spanish 148. Mr. D'Lugo/Offered every other year

149 STUDIES IN LATIN AMERICAN CINEMA/LECTURE, DISCUSSION

Refer to course description under Spanish 149. Conducted in English. Mr. D'Lugo/ Offered every other year

151 MEDIEVAL LITERATURE/ LECTURE, DISCUSSION

Refer to course description under English 150. Ms. Gertz/Offered every year

155 STUDIES IN ITALIAN FILM: NEOREALISM/LECTURE, DISCUSSION

Explores the political, cultural, and aesthetic role of Neorealist cinema in Italy. The linkage between film, history, and nationality during the years 1942-1951 directs us to broader questions concerning the relations between art and politics in fascist, Resistenza, and contemporary Italian culture. In addition to film texts and selections from the controversial critical debate over Neorealism in film and cultural history, we consider both precursors and inheritors of Neorealist cinema. Ms. Butzel/Offered every other year

160 FRENCH CULTURE SEEN THROUGH FILM: JEAN RENOIR/ LECTURE,DISCUSSION

Refer to course description under French 160. Mr. Spingler/Offered every other year

168 MUSIC IN GERMAN LITERATURE AND THOUGHT/ LECTURE, DISCUSSION

Refer to course description under German Literature Taught in English: German 168. Mr. Kaiser/Offered every other year

169 PSYCHOLOGY OF LOVE AND HATE IN LIFE AND LITERATURE/ LECTURE, DISCUSSION

Refer to course description under Psychology 256. Mr. Kaplan/Offered every other year

175 LITERATURE AND EXISTENTIALISM/SEMINAR

The course is an introduction to major writers and themes of existentialism from Dostoyevsky, Kierkegaard, and Nietzsche to Sartre, Beauvoir, and Camus. Beginning with a study of the cultural origins of existentialism as a distinctively modern, European sensibility, we explore why and how existentialist thought has found expression as both philosophical literature and literary philosophy. Ms. Kaufmann/Offered periodically

180 LATIN AMERICAN LITERATURE IN TRANSLATION/LECTURE, DISCUSSION

Refer to course description under Spanish 180. Ms. Acosta Cruz, Ms. D'Lugo/Offered every other year

181 THE LITERATURE OF MODERN SPAIN IN TRANSLATION/LECTURE, DISCUSSION

Readings representing the major authors and trends in the literature of Spain in the nineteenth and twentieth centuries. Particular emphasis on the realist novels of Galdós and Clarín in the nineteenth century; the philosophical novels of Unamuno and Pérez de Ayala, poetry and theater of Lorca, and the post-modernist narratives of Goytisolo in the twentieth century. Mr. D'Lugo/Offered every other year

188 THE CULTURE OF THE WEIMAR REPUBLIC IN LITERATURE, FILM, AND THE ARTS/LECTURE, DISCUSSION

Refer to course description under German 188. Mr. Schatzberg/Offered every other year

191 FRENCH VERSUS AMERICAN TELEVISION/LECTURE, DISCUSSION

Through the analysis of both mainstream and avant-garde video programming from France and the U.S., the course is designed to give students experience in understanding and theorizing different modes of cultural representation. The course uses previously unavailable materials obtained through PICS (Project for International Communications Studies), a consortium of five universities including Clark. Some of the principal questions we ask are: What kinds of critical procedures are useful in analyzing television? What constitutes a television text in different Western nations? How can we understand the relation of television programming to different cultural situations? Reading includes essays on television theory and analysis, and studies of French and American culture. Ms. Butzel/Offered every other year

192 RICHARD WAGNER'S MUSIC DRAMAS: MYTH AND INNOVATION/SEMINAR

Refer to course description under German 192. Mr. Kaiser and Brian Belet/Offered periodically

205 THE PLAY AND ITS STAGES/SEMINAR, WORKSHOP

A critical approach to the dramatic text based on historical and material conditions of performance. The course considers the changing ways that meanings are made through styles and conventions of performance (including set, costume, mask, and vocal delivery) which are specific to historical and cultural moments. Playwrights considered may include Sophocles, Shakespeare, Racine, Molière, Chekov, Ibsen, Brecht, Genet, and Beckett. There is scene work in class. Mr. Spingler/Offered every other year

206 LANGUAGES OF THEATER/SEMINAR, DISCUSSION

A study of the way meanings are made in theater through structure and sign. The course examines the function of non-verbal communication in theater, especially mask, gesture, movement, and sound. Among the course's concerns will be the influence of certain non-Western dramatic traditions such as *Noh* and *Kabuki* upon a number of Western experimental theaters. Plays may include Euripides's *The Bacchae*, Shakespeare's *The Tempest*, Cocteau's *Eiffel Tower Wedding Party* and *Orpheus*, Apollinaire's *The Breasts of Tiresias*, Jarry's *Ubu Roi*, Genet's *The Balcony*, and Pinters's *Homecoming*. Critical works read include Artaud's *The Theater and its Double*, Brook's *The Empty Space*, and Grotowski's *Towards a Poor Theater*. There will be scene work. Crosslisted with Theater Arts 206. May be taken as a companion course to Comparative Literature 205. Mr. Spingler/Offered periodically

210 POSTMODERNISM/SEMINAR

A comparative approach to postmodernism from the 1940s to the present. An overview of postmodernism and its theories as a wide-ranging cultural movement is followed by readings and discussions of postmodernist writers who have extended boundaries of genre, authorship, theory, and interpretation of literature. Authors include: Julian Barnes, Jorge Luis Borges, Italo Calvino, Julio Cortázar, Milan Kundera, Stanislaw Lem, Gabriel García Márquez, Salman Rushdie, Mario Vargas Llosa, Fay Weldon. Ms. Acosta Cruz/Offered every other year

215 WOMEN'S WRITING IN CONTEMPORARY FRANCE/SEMINAR

This course is a study of major works of French fiction and theory as they question and illuminate each other. We explore these works in the context of the contemporary French feminist controversy between theories of equality and theories of difference, particularly as they relate to notions of *l'écriture feminine*. Readings include Colette, Simone de Beauvoir, Helène Cixous, Marguerite Duras, Luce Irigaray, Monique Wittig, Julia Kristeva. Prerequisite: permission of the instructor. Ms. Kaufmann/Offered every other year

220 THE RUSSIAN NOVEL IN THE NINETEENTH CENTURY/LECTURE, DISCUSSION

Refer to description under Russian 220. Mr. Hughes/Offered every other year

240 STUDIES IN MODERN NARRATIVE FORM/LECTURE, DISCUSSION

The course investigates modifications of the traditional novel form in the twentieth century, changes which have enabled the novel to maintain its position as the preeminent literary genre. Representative works of the following authors are studied: Joyce, Woolf, Beckett, Thomas Mann, Robbe-Grillet, Thomas, and Doctorow. Mr. Hughes/Offered every other year

249 SIGNS & CROSSROADS/SEMINAR

Refer to course description under English 249. Ms. Gertz/Offered periodically

251 SEMINAR IN LITERARY CRITICISM/SEMINAR

Seeks to develop critical sensibilities by concentrating on three major modes of literary criticism: textual, psychoanalytic, and Marxist. We read and discuss both original sources (Freud, Marx, and others) and a wide range of criticism based on their methods. An attempt is made to demonstrate that a complete critical engagement with a literary work must start from a close examination of the text itself, proceed to a consideration of the interaction between text and the author's life and mind, and from there, to an investigation of the social setting that conditions text, life, and mind. In order to unify discussion and development, the seminar centers around a thorough critical appraisal of the works, life, and society of Franz Kafka. Primary material includes his short stories, his novel *The Trial*, *Letter to His Father*, and *Letters to Milena*. Mr. Hughes/Offered periodically

260 INTERPRETATIONS OF DREAMS/LECTURE, DISCUSSION

Refer to course description under Psychology 260. Mr. Kaplan/Offered every other year

276 SYMBOLISM IN EVERYDAY LIFE: MYTH, DREAM, AND SYMBOL/SEMINAR

Refer to course description under Psychology 276. Mr. Kaplan/Offered periodically

277 THE CREATIVE PROCESS/SEMINAR

Refer to course description under Psychology 277. Mr. Kaplan/Offered periodically

278 MODERN POLITICAL LITERATURE/SEMINAR

Refer to course description under English 278. Mr. Sultan/Offered every year

284 AMERICAN SPACES I/DISCUSSION

Refer to course description under English 284. Mr. Conron/Offered every other year

285 AMERICAN SPACES II/DISCUSSION

Refer to course description under English 285. Mr. Conron/Offered every other year

286 AMERICAN MODERNISMS/DISCUSSION

Refer to course description under English 286. Mr. Conron/Offered every year

287 MODERNIST SENSES OF PLACE/DISCUSSION

Refer to course description under English 287. Mr. Conron/Offered every year

288 ART OF THE CITY: PARIS/NEW YORK/DISCUSSION

A comparative structural and cultural analysis of two urban designs, Haussmann's Paris and Olmsted's New York; of the visual representation of the two cities by French Impressionists and the American School of Ashcan painters; and of the literary interpretation of the cities by two urban poets, Charles Baudelaire and Walt Whitman. The cities will be considered as theaters in which cultural meanings are produced through 1) spatial composition (the city as assemblage of constructed sets, including boulevards and other promenades, monuments, department stores) and 2) performances in the set (the city as dramatized narrative). Among the questions to be explored is the matter of cultural kinships and differences between France and the United States. Prerequisite: Permission of either instructor. Mr. Conron, Mr. Spingler/Offered every other year

293 STUDIES IN LANDSCAPE/SEMINAR

Refer to course description under English 293. Mr. Conron/Offered every other year

294 HISTORY OF THE ENGLISH LANGUAGE/LECTURE, DISCUSSION

Refer to course description under English 294. Ms. Gertz/Offered periodically

296 WOMEN MIRRORED IN EAST AND WEST/LECTURE, DISCUSSION

Refer to course description under English 296. Ms. Gertz, Mr. Ropp/Offered periodically

299 GENDER AND FILM/LECTURE, DISCUSSION

Refer to course description under Screen Studies 299. Ms. Butzel/Offered every other year

Computer Science

PROGRAM FACULTY

Kenneth J. Basye, Ph.D.: artificial intelligence, robotics

Arthur Chou, Ph.D.: algorithms, complexity theory

Harvey Gould, Ph.D.: computer simulation

Frederic Green, Ph.D.: theory of computation, structural complexity, circuit complexity

David Joyce, Ph.D.: semantics of programming languages

THE COMPUTER SCIENCE UNDERGRADUATE MAJOR

The department offers a strong program in which computer science is viewed as an essential discipline within the general academic mission of Clark University. In keeping with Clark's liberal arts tradition, the program emphasizes concepts and principles, rather than engineering. The computer science major provides preparation for a variety of career paths, both inside and outside the academic community. The program includes two courses in computer programming, which serve as the general introductory courses for the discipline, and four intermediate courses, which serve as the core requirements for the major and expose the fundamental principles of computer science. Beyond this, a series of elective courses is offered, in which applications and advanced topics are explored.

DECLARING A MAJOR AND CHOOSING A DEPARTMENTAL ADVISOR

The department has a system of advising to assist students with their course selections. A student must declare his/her major no later than the end of the second semester of the sophomore year. At the time a student declares a major, he/she should select an advisor from among the department faculty; the advisor will sign the "declaration of major" form available from the Office of Student Records. This advisor will help the student design the best program of courses to suit his/her goals. A department form also is completed at this time and kept on file at the department office.

NOTICE ON CHANGES IN THE MAJOR

The requirements for the major have been changed from those described in the *1992-94 Clark University Academic Catalog*. Students declaring a major after June 1, 1994, must satisfy the requirements listed below. Those who declared before June 1, 1994, may satisfy either the old requirements or these new requirements.

REQUIREMENTS FOR THE COMPUTER SCIENCE MAJOR

To graduate as a computer science major a student must complete the following courses:

A. These Two Introductory Courses:
   CSci 101 Programming I
   CSci 102 Programming II

B. These Three Mathematics Courses:
   Math 114 Discrete Mathematics
   One year of calculus (Math 120-121, or Math 124-125, or Math 110-111-112)

C. These Four Core Courses:
   CSci 140 Assembly Language and Computer Organization
   CSci 160 Data Structures and Algorithms
   CSci 170 Analysis of Programming Languages
   CSci 180 *Automata Theory*

D. Four courses in computer science at the 200 level, (not including internships or reading courses except with departmental approval)

SUGGESTED PROGRAM SEQUENCE

It is important to begin the computer science program early. An ideal program sequence begins with CSci 101, *Programming I*, in the fall of the first year, followed by CSci 102, *Programming II*, and Math 144 *Discrete Mathematics*, in the spring semester. The four core courses and calculus should be taken as soon as possible thereafter.

Discrete Mathematics, Math 114, which covers the concepts, principles, and methods of related mathematics, is required of all majors and should be taken as early as possible by students who may be interested in computer science. This course is essential for most computer science beyond the introductory level. All majors also are required to take one semester of calculus. Discrete mathematics and calculus should be taken during the freshman year, if possible. If both cannot be taken during the freshman year, preference should be given to discrete mathematics. These requirements are meant to ensure that all students will have the appropriate mathematical tools in order to study computer science.

HONORS PROGRAM

A major who maintains at least a 3.2 average (4.0 scale) in courses required for the major may apply for the department honors program. A student's application in writing must be directed to a prospective honors advisor or the chair of the department by the end of the student's junior year. Honors may be achieved in one of two ways: (1) a unified four-course sequence as a senior (some parts of which may consist of directed readings), followed by a comprehensive examination; (2) an honors project to be presented at an oral defense or at a department seminar. This project may be an independent or joint research thesis, or it may be a programming project. Supporting course work may be required. Students interested in pursuing the honors program should consult their department advisor. The student registers for CSci or Math 299, Sec. 8 for course credit for an honors thesis. Upon satisfactory completion of the program, the department may recommend graduation with honors, high honors, or highest honors.

■ REQUIREMENTS FOR THE COMPUTER SCIENCE MINOR

A minor in computer science consists of six courses: CSci 101-102, *Computer Programming I* and *II*, and four other courses in Computer Science (although Math 114, *Discrete Mathematics*, may substitute for one), at least one which is at the 200-level.

Here are some sample minors in computer science:

- Software sequence: CSci 101-102, Math 114, CSci 160, 170, and 250.
- Theory sequence: CSci 101-102, Math 114, CSci 160, 180, 270.
- Artificial Intelligence sequence: CSci 101-102, 170, 210, 211 or 212, and elective.

■ COMPUTER SCIENCE COURSES

100 COMPUTER APPLICATIONS/ LECTURE, LABORATORY

Students learn to use four programs available on Clark's Macintosh computers: a word processor, a painting and drawing program, a spread sheet processor, and a data base management system. They also learn a little bit about the programming language Pascal, and write two or three short programs. Lecture topics include the history of computing since about 1940, operating systems, and how large software systems are developed. There are no prerequisites for the course. It is meant to be an introduction to computing for persons who want to use personal computers, and to understand in a general way what computing is about. Prospective computer science majors and persons who plan to write original programs should prefer CSci 101 to CSci 100. Staff/Offered every year

101 COMPUTER PROGRAMMING I/ LECTURE, LABORATORY

An introduction to computer programming using Pascal, a powerful general purpose, structured programming language. The theme of this course is the top-down approach to problem solving. Algorithms are first developed for the solutions to stated problems. These algorithms are then translated into Pascal and tested by running the resulting program on the computer. The top-down approach is used throughout the entire process. For the laboratory component, students are expected to write approximately seven programs throughout the course. Specific topics include decision making, logic design, iteration, arrays, text files, and records. An introduction to the design of data structures through Pascal type definitions, using the primitive data types and the composite types of arrays and records is discussed as well. Applications are presented as they relate to business, computer simulations, and games. This course satisfies the formal analysis requirement. No prerequisites. This course is a prerequisite for most higher-numbered computer science courses. Mr. Basye, Mr. Chou, Mr.Green, Mr. Joyce, Mr. Kilmoyer/Offered every semester

102 COMPUTER PROGRAMMING II/LECTURE, LABORATORY

A continuation of CSci 101, covering such topics as string manipulation, data files and their processing, pointer variables, and dynamic data structures such as linked lists, stacks, queues, and binary trees. A treatment of the usage and implementation of recursion also is discussed. Approximately six programming projects are assigned as the laboratory component of the course. These projects entail the top-down design and implementation of larger programs involving the topics mentioned above. Prerequisite: CSci 101. Mr. Basye, Mr. Chou, Mr.Green, Mr. Joyce, Mr. Kilmoyer/Offered every semester

115 COMPUTER SIMULATION LABORATORY

Refer to course description under Physics 115. Mr. Gould/Offered every year

120 THROUGH 129: SHORT COURSES IN PROGRAMMING LANGUAGES/LECTURE, LABORATORY

These are short midsemester courses for 1/4 or 1/2 credit each. Each course will introduce a new programming language to students who already know at least one high-level programming language. The prerequisite is a one semester college-level programming course. These courses are offered as credit/no credit and do not fulfill any requirements towards the computer science major. Staff/Offered periodically

140 ASSEMBLY LANGUAGE AND COMPUTER ORGANIZATION/ LECTURE, LABORATORY

Covers fundamentals of assembly language programming in the VAX/MACRO language such as data representation, the instruction set, addressing mode, macros, procedures, input and output facilities, assembler and linker, introduction to record management system and system services, introduction to logic circuits, and basic machine organization of conventional computers in general and VAX in particular. The goal is to understand how a computer performs various tasks that are completely hidden from the user in a high-level language. For the laboratory component, students will write several programs in VAX 11 assembly language. Prerequisite: CSci 102. Mr. Chou, Mr. Joyce/Offered every year

160 DATA STRUCTURES AND ALGORITHMS/LECTURE, DISCUSSION, LABORATORY

Deals with advanced data structures such as sets, trees, and graphs, together with the algorithms to manipulate them. Applications to searching and sorting are discussed. Throughout the course, the analysis of algorithms is stressed. The pros and cons of alternative choices of data structures or algorithms are carefully examined. Topics include: analysis of algorithms (a review of big O notation and simple recurrence relations from CSci 102 and Math 114), general trees, balanced trees, priority queues, hash tables, merge-sort, quick-sort, radix sorting and searching, and elementary graph algorithms such as finding the shortest path and constructing a minimal spanning tree. This course has a fourth hour problem-solving session. Programming projects are assigned for the laboratory component. Prerequisite: CSci 102 and Math 114. Mr. Chou, Mr. Green/Offered every year

170 ANALYSIS OF PROGRAMMING LANGUAGES/LECTURE

Deals with the issues of the design and implementation of programming languages from both the syntactic and the semantic point of view. Emphasis is on the desirable features of programming languages from a comparative standpoint. Topics include: the representation of rules of syntax, using context-free grammars, parsing, semantic constructs, control structures, implementation of procedures and parameters, implementation of recursion, and an introduction to the organization of compilers. Attention is given to both compiled and interpreted languages. Functional as well as procedural programming languages are discussed. A typical group term project may be to design and implement a compiler or interpreter for the actual implementation of some language. Prerequisites: CSci 102 and Math 114. Mr. Green, Mr. Kilmoyer/Offered every year

180 AUTOMATA THEORY/LECTURE, DISCUSSION

Studies the abstract models of machines and languages recognized by them, and introduces the concept of computability. This course not only serves as the theoretical foundation of computer science, but also has wide applications to programming languages, linguistics, natural language processing, compiler design, and software design. It begins with a review of sets, functions, and relations, then continues with finite automata and regular languages, pushdown automata and context-free grammars, grammar transformations and normal forms, and finally the mathematical model of modern computers: Turing machines and computable functions. Some examples of unsolvable problems, such as the halting problem, will be discussed. This course has a fourth-hour problem-solving session. Prerequisite: CSci 102 and Math 114. Mr. Chou, Mr. Green, Mr. Joyce/Offered every year

201 PROSEMINAR IN COMPUTER SCIENCE/SEMINAR

The presentation of topics in computer science by and for senior undergraduates. These presentations acquaint students with diverse subjects, introduce them to researching known topics, and give them practice in presenting material to their peers. Faculty members will also present some research topics. Possible areas from which the topics may be drawn might include NP complete problems, machine understanding of natural language, neural networks, the philosophical debate on the nature of mind and machine intelligence, automated reasoning, theory of computation, expert systems, parallel algorithms. Prerequisites: CSci 160 and CSci 170. Staff/Offered periodically.

210 ARTIFICIAL INTELLIGENCE/LECTURE, LABORATORY

This course focuses on the fundamental ideas of artificial intelligence and programming in Lisp. Topics included are problem representation through explicit models, notion of problem state, state variable, feedback and control, network searching, analogy and pattern recognition, natural language parsing, forward and backward deduction using rule-based systems, and knowledge representations schemes. Students implement the above ideas through computer programs written in Lisp. Language instruction is provided in Lisp (or Prolog), although no prior knowledge of these programming languages is assumed. Open to all students who have taken at least one semester of programming (in any language). Mr. Basye, Mr. Kilmoyer/Offered every year

211 TOPICS IN ARTIFICIAL INTELLIGENCE/LECTURE

Selected topics in artificial intelligence are studied in more depth, assuming CSci 210, *Artificial Intelligence*, as a foundation course. Topics may be drawn from the fields of expert systems, knowledge acquisition and representation, logic programming, or the use of artificial intelligence techniques in some application field, such as music. Topics vary from year to year. Prerequisite: CSci 210. Mr. Basye, Mr. Kilmoyer/Offered periodically

212 NATURAL LANGUAGE PROCESSING/LECTURE, LABORATORY

This is a course on machine understanding of natural language. Although many topics are presented, emphasis is on the use of conceptual data structures that enable the computer to form semantic representations of natural language input, and on the cognitive processes that underlie natural language understanding by humans. As a term project, students write a story-telling program which is given characters with goals and generic plans for achieving goals. The program then produces a story relating the events that transpire when the characters attempt to achieve their goals. Conceptual dependency structures are used to represent the necessary knowledge in the program. Topics include methods of parsing natural language input, recursive transition networks, augmented transition networks, semantic grammars, wait-and-see parsers, the construction of natural language interfaces for computer programs, linguistic theories, case grammars, semantic networks, conceptual dependency theory. Students write programs in Lisp to implement some of the above. Prerequisite: CSci 210. Mr. Kilmoyer/Offered periodically

215 OPERATING SYSTEMS/ LECTURE, LABORATORY

This advanced course studies the structure, performance, and design of operating system. Topics include concurrency, deadlocks, scheduling, and memory management. Various operating systems may be examined and compared. Students will design and implement parts of operating systems. Prerequisite: CSci 160. Mr. Green/Offered every other year

220 DATABASE MANAGEMENT AND SYSTEMS DESIGN/LECTURE

An advanced course on the realities of database technology. The course emphasizes the goals of database management: performance, data integrity, future compatibility, and versatility. The concept of data model is examined and a specific database is discussed. The course concentrates on database design and specification. Prerequisite: CSci 160. Mr. Chou/Offered every other year

230 COMPILER DESIGN/LECTURE, LABORATORY

This course is essentially a continuation of CSci 180, Automata Theory. It uses the automata and grammars introduced in CSci 180 to design translators (compilers) for programming languages. Topics include lexical analysis, top-down parsing, bottom-up parsing, syntax-directed translation, type checking, run-time environment, code generation, and an introduction to code optimization. A typical term project is to write a compiler for a simple programming language such as a subset of C or Pascal. Prerequisites: CSci 160 and CSci 180. Mr. Chou, Mr. Green/Offered every other year

240 COMPUTER ARCHITECTURE/LECTURE

A study of the design of computers. Topics include the design of combinatorial and sequential circuits, design methodology of a basic computer, central processor organization, microprogramming, memory organization, input-output organization, and arithmetic processor design. As time permits, further topics, such as RISC and parallel processing, are discussed. A functional, logical (theoretical) approach is adopted. (Physics 119, Electronics Laboratory, is recommended so that students gain hands-on experience with computer chips.) The science of design is stressed together with the existing machines. Prerequisite: CSci 140. Mr. Basye, Mr. Chou, Mr. Joyce/Offered every other year

250 SOFTWARE DESIGN AND DEVELOPMENT/SEMINAR

Students consider the life cycle of large software projects, beginning with the elicitation and definition of users' requirements, and continuing through software design, documentation, coding, testing, and maintenance. Topics include: modularity, coupling, cohesion, transformational and transactional structures, and testing strategies. Working in teams, students gain practical experience developing software to solve concrete problems. Prerequisites: CSci 160 and CSci 170. Mr. Basye/Offered periodically

270 THEORY OF COMPUTATION/LECTURE

This course studies the nature and formal models of computation (by computers), its power and limitation (computability versus uncomputability), the computational complexity of various problems, and the applications in logic and computer science. The question "What is a program?" is answered in full generality, establishing the theoretical underpinnings of all software construction. Turing machines, general recursive functions, and other standard models of computation are introduced and are shown to be equivalent, leading to the formulation of Church's thesis. Other aspects of recursion theory such as unsolvable problems and recursively enumerable languages are introduced. We also address the more practical question "What is an efficient program?" in an introduction to modern complexity theory. Here the emphasis is on the theory of NP-completeness and related notions which have important analogies in classical recursion theory. Prerequisite: CSci 180. Mr. Chou, Mr. Green/Offered every other year

Economics

DEPARTMENT FACULTY

Frank Puffer, Ph.D., chair: regional economics, African economic development, health economics

Daniel M. Bernhofen, Ph.D.: international economics

John C. Brown, Ph.D.: economic history

James Peter Ferderer, Ph.D.: monetary theory, macroeconomics, finance

Wayne B. Gray, Ph.D.: labor economics, econometrics, microeconomic theory

Robert C. Hsu, Ph.D.: economic development, comparative economic systems, international economics

Attiat F. Ott, Ph.D.: economic theory, public finance, health economics, macroeconomics

Roger C. Van Tassel, Ph.D.: international trade and finance, public economy

E.C.H. Veendorp, Ph.D.: microeconomic theory

Maurice D. Weinrobe, Ph.D.: monetary economics, economics of population

EMERITI FACULTY

Howard W. Nicholson, Ph.D.: history of economic thought, accounting, investment, economic methodology

UNDERGRADUATE PROGRAM

The undergraduate program is designed to give the student a comprehensive grasp of the underlying principles and functions of economic institutions and to help the student develop habits of systematic thought.

GOALS OF THE MAJOR

The rationale for economics majors can be stated briefly and simply: We believe economics offers useful insights into fundamental human behavior in the decision-making process and into a great variety of national issues. While we recognize that economics alone seldom gives answers, we also feel that there are few issues, at least in the social sciences, in which the contribution of formal economic analysis does not play a necessary role. There are obviously some advantages in an economics major besides a more broadly accepted educational value. It is a good preparation for law, business, and a number of other professional and nonprofessional careers. However, the emphasis of our program is the educational one. The major in economics is devised to help the student think and develop.

Students planning on pursuing graduate work should consult their departmental advisor and assist in developing an appropriate plan of study. For graduate work in economics, students are encouraged to take calculus and additional courses in math.

REQUIREMENTS FOR THE MAJOR

1) Economic Theory courses
   Econ 010, Economics: A Comparative Approach
   Econ 011, Principles of Economics
   Econ 205, Microeconomic Theory
   Econ 206, Macroeconomic Theory

2) Quantitative Methods courses
   Econ 160, Introduction to Statistical Analysis

3) Economics Electives
   Five economics courses other than the above. At least two of the five courses must be at the 200 level. An internship may not be used to satisfy one of the elective course requirements.

4) Related courses
   Two courses outside the Economics Department, but related to the major, must be taken. Related courses may be of two types. Some courses, listed below, will satisfy the related course requirement regardless of the economics elective courses in the major.

   Math courses at the level of calculus or above.
   Management courses in accounting, finance, MIS and operations management
   Computer Science courses
   ENV 124, Environment and Economy
   Geog 015, Economic Geography
   Geog 262, Urban Economic Geography

Other courses may be related to the major through a connection with the economics electives a student has chosen. For example, if a student selected Econ 243, American Economic History, as an elective, any American History course offered by the history department would then be related to the major. Similarly, most courses in International Development would be related to the Economics major if the student elected to take Econ 128 or 228, Economic Development. Many other possible relations exist. Students should consult with their departmental faculty advisor for related courses of this type.

5) Capstone course
During the final year of the major, a course must be taken which satisfies the capstone requirement. The capstone course is not in addition to other requirements but instead counts as one of the five economics electives. There are three ways of accomplishing this:

a) Participation in the Honors Program (see below).

b) 200-level economics research course. The department will list courses each year that qualify as research courses. Currently, the list includes Econ 215 (Public Expenditures), Econ 216 (Tax Systems and Policies), Econ 222 (Labor Economics), Econ 225 (Health Economics), and Econ 250 (Economics of Sport). Others will be added in the future.

c) Directed Research course. For students unable to meet the capstone requirement through (a) or (b), arrangements can be made for individually directed research work.

■ HONORS REQUIREMENTS

Economics majors with strong records may be accepted by the department as candidates for departmental honors. For students to receive departmental honors, they must successfully complete an honors thesis. Prospective candidates for honors should identify an area of interest and a potential faculty supervisor of the honors thesis during the spring of the junior year. During the fall of the senior year, the students will enroll in Economics 299, sec. 8, Honors. The student then writes a thesis under the direction of a faculty supervisor. During the spring of the senior year the thesis is completed and then evaluated by the department for possible departmental honors.

■ GRADUATE PROGRAM

The University offers a program of graduate study and research leading to the doctor of philosophy in economics. Graduate students may elect to take a limited amount of work in related courses offered by other departments.

Scholarships and fellowships are available for well-prepared students. These appointments exempt their holders from tuition fees, and some carry stipends in varying amounts. Several teaching assistantships are also awarded, enabling graduate students to gain experience in undergraduate instruction. These cover remission of tuition and a cash payment, currently up to $8,150, for part-time work.

Two full academic years of graduate work, or the equivalent in part-time work, are necessary for admission to Ph.D. candidacy. One of these years must be spent in residence at Clark University. "In residence" is broadly defined as work done at Clark University. All candidates for the Ph.D. in economics are required to demonstrate proficiency in economic theory, econometrics, and mathematical economics, and to complete three selected fields.

Econometrics and mathematical economics are satisfied by passing designated courses offered in the department or, in the case of prior preparation, by passing a test given by the department.

The economics theory requirement includes micro-theory and macro-theory. The student meets the economic theory requirement by satisfactory completion of the theory courses Economics 300, 301, 302, 303, and 304, and by passing two three-hour preliminary examinations.

Upon completion of coursework in economic theory, econometrics, and mathematical economics and passing of the preliminary examinations, the student is admitted to candidacy for the Ph.D. Fields of specialization may be selected from among the following: monetary economics, public finance, industrial organization, international economics, comparative economic systems, advanced theory, health economics, environmental economics, economic development, labor economics, or one field selected from related subjects. Not all graduate field courses are offered each year. At least two field courses are offered annually. Typically, two fields are taken during the second year, and the remaining field requirement is completed, along with the beginning of the dissertation, during the third year.

Soon after having completed the field requirements, each student is expected to develop a written prospectus of a dissertation. The student then makes a presentation at an informal conference with all graduate students and faculty invited to attend. After the presentation, the primary advisor, in consultation with the chairman, appoints the dissertation committee if the topic is judged feasible.

Upon completion of the dissertation in a form acceptable to the committee, the candidate makes a copy of the dissertation available to the department, the faculty, and graduate students. After a period of two weeks (to permit sufficient time for reading of the dissertation), the candidate presents the dissertation at a seminar open to all faculty and graduate students in the department. Final approval of the dissertation is granted by the committee after consideration of any suggested changes or challenges arising from the seminar. If the dissertation is not completed within five years of admission to candidacy, the student must successfully retake the preliminary examination in economic theory before defending the dissertation.

The dissertation must be a real contribution to knowledge, based upon independent research, convincingly presented, and acceptably written. Published articles may be accepted by the department instead of a dissertation. Some teaching and research experience at Clark, or other such teaching and research as the department may regard as equivalent, is prerequisite to the doctoral degree.

Students enrolled in the Ph.D. program may be awarded the M.A. degree upon satisfactory completion of a two-year residency and preliminary exam. In the case of students who do not continue toward the Ph.D., the M.A. may be awarded upon satisfactory completion of twelve required courses or one-year residency, an M.A. thesis and an oral exam.

A student should discuss program plans with the graduate student advisor on or before registration day, and secure approval of the course program.

INSTITUTE FOR ECONOMIC STUDIES

The Institute for Economic Studies, funded with an initial grant from the John M. Olin Foundation, began its operations in January 1980. The institute's main objectives are:

1. To research significant economic issues and propose policy options to deal with them; and
2. To disseminate the results of the research—particularly its policy recommendations—to a broad audience.

The institute provides a framework within which new curricula and teaching methods may be developed. In addition, a Scholars-in-Residence Program was instituted in 1984 to stimulate the exchange of ideas and dialogue between guest scholars and members of the institute and economics faculty. The institute director is Professor Attiat F. Ott.

CENTER FOR THE STUDY OF HEALTH ECONOMICS

Clark University's Center for the Study of Health Economics was officially inaugurated in August 1987 as an integral part of the Economics Department and the Institute for Economic Studies. The primary goal of the center is to conduct research on health economics issues of concern to policy makers, providers, and consumers of health care services.

COURSES

010 ECONOMICS: A COMPARATIVE APPROACH/LECTURE, DISCUSSION

The student is introduced to the vital contribution economics can make to systematic thought and understanding by analysis of important current policy issues. Rather than emphasizing economic theory, the course begins with a comparative analysis of issues in the social sciences that are of obvious and important concern. From a study of issues, the course proceeds to show how development and use of some basic economic concepts can aid materially in the analysis. Open to first-year students. Multiple sections. Staff/Offered every semester

011 PRINCIPLES OF ECONOMICS/ LECTURE, DISCUSSION

Introduction to economic analysis. Develops a set of economic concepts utilized in the 200-level courses offered in the department. Elements of price and income theory are emphasized. Policy questions are treated both to reinforce concepts and to illustrate applicability of the analysis. Open to first-year students. Prerequisite: Economics 10. Staff/Offered every semester

108 INTERNATIONAL ECONOMICS: TRADE AND FINANCE /LECTURE, DISCUSSION

Introduction to the basic principles of international economics. The course examines the development of the international monetary system and current problems. Students planning to take Economics 207 or 208 should not take 108. Prerequisite: Economics 10 and 11. Mr. Van Tassel/Offered every year

113 MONETARY ECONOMICS: THEORY AND POLICY/LECTURE, DISCUSSION

The theory of money and its role in the modern economy are examined, as are determinants of the supply of money and analysis of the role of monetary policy in stabilization policy. Commercial banks and nonbank financial intermediaries are studied. Prerequisite: Economics 10. Staff/Offered every year

125 HEALTH ECONOMICS/ LECTURE, DISCUSSION

This course examines the economic processes and activities of health care systems and instituions. Major issues including competition, role of governments, and insurance are among the topics that are investigated to assist students in understanding how economic considerations affect the delivery of care. Mr. Puffer/Offered periodically

126 PUBLIC POLICY TOWARD BUSINESS/LECTURE, DISCUSSION

Examines the various types of industrial organization, the degrees of monopoly in competition, and the development of public policies that affect business. Among issues traced are the development of antimonopoly regulation, consumer protection, and public utilities. Business performance and government regulations are related to criteria from economic theory. Prerequisite: Economics 10. Mr. Veendorp/ Offered every other year

128 ECONOMIC DEVELOPMENT/ LECTURE, DISCUSSION

Covers same general material as Econ 228, but requires less previous preparation in economics. Offered in alternate years with 228. See course description under Economics 228. Prerequisite: Economics 10. Mr. Hsu/Offered every other year

142 EUROPEAN ECONOMIC HISTORY/LECTURE, DISCUSSION

See description for Econ 242. Prerequisite: Economics 10. Mr. Brown/Offered every year

143 AMERICAN ECONOMIC HISTORY/LECTURE, DISCUSSION

See description for Econ 242. Prerequisite: Economics 10. Mr. Brown/Offered every year

155 THE ECONOMICS OF NATURAL RESOURCES AND THE ENVIRONMENT/LECTURE

A review of political economic problems associated with such natural resources as agricultural land, energy goods, and minerals—as well as a resource common to all of us, our natural environment. Typical issues to be analyzed include the assessment of environmental impacts within a market-oriented economy, the potential role of international cartels in resource allocation, and the assessment of nuclear generation from an economic standpoint. Prerequisite: Economics 10. Ms. Eom/ Offered every year

160 INTRODUCTION TO STATISTICAL ANALYSIS/ LECTURE, DISCUSSION

Examines basic concepts and techniques of statistical method in economic analysis: descriptive statistics, probability theory, sampling distribution, standardized normal distribution and other related distributions, simple and multiple regression, simple forecasting, and statistical decision making. Prerequisite: Economics 10. Mr. Puffer, Mr. Veendorp/ Offered every semester

171 FUNDAMENTAL MATH FOR ECONOMICS/LECTURE, DISCUSSION

This course introduces the mathematical tools used in economic analysis. After completing this course, the student should feel comfortable with the mathematical techniques likely to be encountered in an undergraduate economics program. Applications are drawn from a variety of fields within economics, but with particular emphasis on microeconomics. Prerequisite: Economics 10 and 11. Staff/Offered periodically

176 COMPARATIVE ECONOMIC SYSTEMS/LECTURE, DISCUSSION

Examines the theory and practice of selective cases of capitalism, market socialism and centrally planned socialism. Major topics include the welfare state and industrial democracy of Sweden, industrial policy and corporate groupings in Japan, workers' self-management in Yugoslavia, problems of centrally planned socialism, and the dilemmas of socialist reforms in Hungary and the former Soviet Union. Prerequisite: Economics 10. Mr. Hsu/ Offered every year

177 JAPANESE AND CHINESE ECONOMIES/LECTURE, DISCUSSION

A comprehensive survey of the Chinese and Japanese economies—their development, institutions, and policies. Topics include historical background, agricultural development, industrial organization and development, fiscal and monetary policies, employment and labor, Sino-Japanese relations, and relations with the United States. Prerequisite: Economics 10. Mr. Hsu/Offered every other year

205 MICROECONOMIC THEORY/LECTURE, DISCUSSION

Describes and analyzes how a market-oriented economy functions in answering the five basic economic questions. These are: (a) What commodities to produce? (b) How much of each to produce? (c) What productive techniques to use and how to provide incentive? (d) How to distribute the output among the various members of society? (e) What provision to make for the future? Interspersed with the theory, the course contains frequent examples that demonstrate the use of microeconomics in solving problems faced by the decision-making unit in both the private and public sectors. Prerequisite: Economics 11. Mr. Veendorp, Mr. Brown/Offered every semester

206 MACROECONOMIC THEORY/LECTURE, DISCUSSION

Focuses on the forces that affect the overall performance of the economy. A study of the determinants of economic activity (such as consumption, investment, government purchases, and exports) and measures of economic performance (such as the level and rate of growth of national income and product, the level of employment and unemployment, the general price level, and the nation's balance of international payments). Also deals with specific, current economic problems facing the United States and discusses public policies instituted to deal with them and the repercussions of some of these policies on world economies. Prerequisite: Economics 11. Mr. Ferderer, Mr. Puffer/Offered every semester

207 INTERNATIONAL TRADE THEORY/LECTURE, DISCUSSION

Applies and develops concepts of economic theory to such topics as: determinants of international and regional specialization and trade, the theory of tariff intervention, the balance of payments, adjustment forces and disequilibria, and application of theory to important issues of international trade. Prerequisite: Economics 11 and 205. Mr. Van Tassel/Offered every year

208 INTERNATIONAL MONETARY THEORY/LECTURE, DISCUSSION

This course studies the impact of international trade and investment on macroeconomic policy and problems of the international monetary system. Prerequisite: Economics 11 and 206 or 207. Staff/Offered every other year

215 PUBLIC EXPENDITURES/ LECTURE, WORKSHOP

Examines issues and priorities related to the size and composition of the federal budget and federal programs. Evaluation of federal budget expenditures and program levels according to criteria of cost-benefit analysis and cost effectiveness are carried out. Issues relating to private-public use of resources and how public policy affects these uses are also examined. Prerequisite: Economics 11. Ms. Ott/Offered every other year

216 TAX SYSTEMS AND POLICIES/LECTURE, WORKSHOP

Analyzes the federal tax system and U.S. tax policies. Explains emerging issues in federal taxation, including tax equity, the effect on income distribution, the relative tax burden of the rich and the poor, and alternative tax systems, as well as reform proposals to restructure the U.S. tax system. Tax incentives as a goal for economic growth are also discussed. Prerequisite: Economics 11. Ms. Ott/Offered every other year

222 LABOR/LECTURE, DISCUSSION

Applies the concepts of labor supply and labor demand in a basic model of labor markets. The model is used to analyze the results of the labor market: wages, employment, and unemployment. The analysis is modified to allow for market imperfections and nonmarket forces, including trade unions and the government. Further topics are discussed, including wage discrimination and income inequality. Prerequisite: Economics 11 and 205 or permission of instructor. Mr. Gray/Offered every year

223 CONTEMPORARY POLITICAL ECONOMY/SEMINAR

Examines the interaction of political and economic forces in evolving capitalist and socialist societies. Prerequisite: Economics 11. Mr. Van Tassel/Offered every year

226 INDUSTRIAL ORGANIZATION/LECTURE, DISCUSSION

Course takes the concepts learned in Intermediate Microeconomic Theory to the next level. More complicated theories of firm behavior are examined. By allowing issues such as product differentiation and imperfect knowledge to enter the analysis, students gain access to more realistic views of industrial structure and performance. Practical applications of these theories can then be examined through the use of specific industry studies. Prerequisite: Economics 11. Mr. Veendorp/ Offered periodically

228 ECONOMIC DEVELOPMENT/ LECTURE, DISCUSSION

Examines the major theories of economic development, the major problems confronting less developed countries, and the policies and strategies appropriate for economic development. Topics include agricultural development, income distribution, industrialization strategies, foreign aid and investment, population, labor, and employment. Offered in alternate years with Econ 128. Prerequisite: Economics 11. Mr. Hsu/Offered every other year

242 EUROPEAN ECONOMIC HISTORY/LECTURE, DISCUSSION

This course applies the tools of economic analysis to help understand the major stages of European economic development, from the feudal economy to the European Economic Community. Primary emphasis is on the industrialization of Great Britain, Germany, France, and Russia, and the postwar restructuring of the European economy. Prerequisite: Economics 11. Mr. Brown/Offered every year

243 AMERICAN ECONOMIC HISTORY/LECTURE, DISCUSSION

This course offers a comprehensive survey of the development of the United States economy from a colonial backwater to a leading industrial power. It emphasizes the use of economic reasoning to understand historical controversies such as the struggle over slavery, economic imperialism, and the causes of the Great Depression. Prerequisite: Economics 11. Mr. Brown/Offered every year

244 EUROPEAN ECONOMY: EAST AND WEST/LECTURE, DISCUSSION

This course offers a critical examination of European approaches to economic policy. In the West, these include the modern welfare state (widely available health care and housing), a more heavily regulated labor market, and moves toward a common market and currency. In the East, governments relied upon central planning and state ownership, even scoring some initial successes. Blending the tools of economic analysis with a close look at policies, this course will offer students an approach to answering these questions and an introduction to the economic challenges facing Western and Eastern Europe in the aftermath of the revolutions of 1989. Prerequisite: Economics 11. Mr. Brown/Offered periodically

247 ECONOMICS OF POPULATION/LECTURE, DISCUSSION

This course deals with an area of substantial new interest, one with especially strong ties to the economics of development, labor economics, health economics, growth, and to economic history. Demography provides an opportunity to use skills,and information from other economics courses and to build on that base; in turn, it provides a stronger base for the study of these areas, and has strong associations with sociology, geography, and other disciplines. Mr. Weinrobe/Offered every year

250 ECONOMICS OF SPORT/LECTURE, DISCUSSION

This course applies economic analysis to the sports industry. While the primary focus is on professional team sports, individual and "amateur" sports are covered as well. Labor relations, antitrust law, public subsidization of sports facilities, discrimination, and sports broadcasting are among the topics that are covered from an economics perspective. Prerequisite: Economics 11. Mr. Puffer/Offered periodically

257 RESOURCE ECONOMICS/LECTURE, DISCUSSION

This course examines some of the issues associated with the economics of natural resources. Topics discussed are chosen from the following: the theory and analysis of renewable and nonrenewable resources, resource cartels, resource scarcity and the economy, and environmental economics. Topics are discussed at both theoretical and empirical levels. Proper policies are discussed to encourage resource conservation, the problems of common property resources, and the importance of resource scarcity to the economy. Prerequisites: Economics 11 and 205. Ms. Eom/Offered periodically

271 INTRODUCTION TO MATHEMATICAL ECONOMICS/ LECTURE, DISCUSSION

An introductory survey of the use of mathematical methods in economic analysis. Special attention is given to the mathematical framework of the theory of price determination. Prerequisite: Economics 11 and permission of instructor. Offered for variable credit. Mr. Veendorp/Offered every year

273 FORECASTING/LECTURE, DISCUSSION

This course investigates a number of forecasting techniques commonly used in economic analysis. Among the techniques covered are time series analysis, econometric models, simulation models, and expectations surveys. Prerequisites: Economics 11 and 160 or equivalent. Mr. Puffer/Offered periodically

277 URBAN ECONOMICS/ LECTURE, DISCUSSION

Economic decisions made by firms and individuals regarding production, investment, and consumption activities inevitably involve a location decision. This course will examine the implications of such location decisions for urban structure, urban and regional growth, and the existence of cities themselves. Topics include: location theory, interregional input/output tables, migration and regional growth. Prerequisite: Economics 11. Mr. Brown/Offered periodically

299 SEC. 1 DIRECTED READINGS

Offered for variable credit. Staff/Offered every year

299 SEC. 2 DIRECTED RESEARCH

Offered for variable credit. Staff/Offered every year

299 SEC.4 FIELD PROJECT

Offered for variable credit. Staff/Offered every year

299 SEC. 8 HONORS

Students work on an individual basis with a faculty member on an intensive piece of research, culminating in an honors thesis. A student desiring departmental honors must register for one semester of Econ 282 in the fall of the senior year. Required for departmental honors. Prerequisite: Econ 11. Staff/ Offered every year

299 SEC. 9 INTERNSHIP

Students spend a semester working full- or part-time outside the University as part of their academic experience. To qualify, the internship experience must significantly involve an extension, embodiment, or illustration of previous or concurrent, systematic academic work in economics. Offered for variable credit. This course does not count toward the economics major. Staff/Offered every year

The following courses are normally open only to graduate students:

300 INTRO GRAD ECONOMICS THEORY

Staff/Offered every year

301 MICROECONOMICS/SEMINAR

Mr. Veendorp/Offered every other year

302 MICROECONOMICS/SEMINAR

Mr. Brown/Offered every other year

303 MACROECONOMICS/SEMINAR

Ms. Ott/Offered every year

304 MACROECONOMICS/SEMINAR

Mr. Ferderer/Offered every year

313 MONETARY ECONOMICS/ SEMINAR

Mr. Ferderer/Offered periodically

325 PUBLIC FINANCE/SEMINAR

Ms. Ott/Offered periodially

326 INDUSTRIAL ORGANIZATION/SEMINAR

Mr. Veendorp/Offered periodically

327 INTERNATIONAL ECONOMICS/SEMINAR

Mr. Bernhofen/Offered periodically

328 ECONOMIC DEVELOPMENT/ SEMINAR

Mr. Hsu/Offered periodically

333 HEALTH ECONOMICS/SEMINAR

Mr. Eze/Offered periodically

355 ENVIRONMENTAL ECONOMICS/SEMINAR

Ms. Eom/Offered periodically

365 BASIC ECONOMETRIC THEORY/LECTURE

Qualified undergraduates may take Economics 365 with the instructor's permission. Staff/ Offered every year

366 APPLIED ECONOMETRICS/ SEMINAR

Mr. Gray/Offered periodically

Education

DEPARTMENT FACULTY

Sarah Michaels, Ph.D., Chair. Relationships among language, discourse, culture, and schooling. Discourse analysis relating to classroom life and learning. Teacher research.

S. Leslie Blatt, Ph.D. Experimental physics, methods and practice in science education, science and society, environmental issues and their scientific dimensions.

Thomas Del Prete, Ed.D. Teacher education, professional development schools, building learning communities, spirituality, and education.

David K. Dickinson, Ed.D. Literacy development, approaches to fostering literacy development of low-income children.

James Paul Gee, Ph.D. Linguistics and education, sociolinguistics, socio-cultural theories of literacy, discourse analysis, science and society, psycholinguistics.

Sharon Griffin, Ph.D. Emotional development, cognitive development, mathematics education.

David S. Zern, Ph.D. Moral development, values and religiosity. Exploration and development of values education in schools. Teacher research; analysis of learning and teaching.

CLINICAL FACULTY

Kenner Myers, M.S. in Education

Nathaniel C. Seale, M.Ed.

Marlene Shepard, M.A.

ADJUNCT FACULTY

Virginia M. Vaughan, Ph.D.

EMERITI FACULTY

Helen J. Kenney, Ed.D. Curriculum development, instructional theory, psychoeducation, evaluation.

William C. Kvaraceus, Ed.D. Measurement, social deviance

Introduction

The Education Department and the Jacob Hiatt Center for Urban Education work together to provide students with outstanding programs in teacher education. The main programs correspond to the two broad levels of teacher certification required in the Commonwealth of Massachusetts. The programs in "provisional" teacher certification enable both undergraduate and graduate students to qualify for the "provisional certificate with advanced standing" at the elementary, middle, or secondary teaching levels. The master's program in "Urban Education and Teacher Research" is designed to fulfill state requirements for the "standard" teaching certificate, which teachers who hold the provisional certificate with advanced standing must earn within five years of beginning teaching. In addition, there are special programs in human services and school psychology, and an Office for Children licensure program for students who wish to work in pre-school, day-care settings.

Several core values and commitments distinguish the Clark teacher education programs:

- a strong commitment to preparing students to work with diverse groups of children in urban settings, reflected in an emphasis on understanding the role of language and culture in the educational process;
- a focus on developing the capacity of teachers as reflective learners and practitioners able to build learning communities with both children and adults, in part by introducing them to various "ways of knowing" in the liberal arts;
- a focus on developing teachers as "researchers" disposed and able to inquire into their own teaching practice and children's learning;
- unique collaborations among education faculty, liberal arts faculty, researchers, teachers, and students fostered throughout the exemplary "professional development school" partnership between Clark and the Worcester Public Schools;
- and, finally, exposure to exemplary learning programs for children in the professional development schools established in part through the efforts of the Hiatt Center and Education Department.

Jacob Hiatt Center for Urban Education

The Jacob Hiatt Center for Urban Education represents a permanent partnership between Clark University and the Worcester Public Schools, dedicated to rethinking the challenges and possibilities of contemporary urban schools. The center brings together teachers, administrators, researchers, and students in collaborations that foster innovation and scholarship in education in a rapidly changing world. The Hiatt Center seeks to set a new vision and standard for urban education nationwide.

Professional Development School Collaborative

Working in partnership with the Worcester Public Schools, the Hiatt Center and Education Department have established a K-12 professional development school ("PDS") collaborative dedicated to building a learning community in which teachers, Clark students and faculty, and children will all thrive. The elementary, middle, and secondary level PDS sites join dynamically the best of university and school, thus providing an exceptionally stimulating and supportive environment for teacher education.

"Provisional" Teacher Certification Programs (undergraduate and graduate)

In order to qualify for the provisional teaching certificate with advanced standing, a student must earn (or hold) a bachelor's degree in the arts and sciences with a disciplinary or interdisciplinary major, and have taken courses appropriate to her/his instructional field(s). In addition, a student must meet the competency requirements for certification set by the state Department of Education.

The Education Department and Hiatt Center offer programs leading to the provisional certificate with advanced standing at the elementary, middle, and secondary levels for both undergraduate and graduate students. Each program integrates course work with field experiences in professional development schools under the guidance of education faculty and expert practitioners. It may be possible for qualified undergraduates to complete a provisional certification program during a tuition-free fifth year (a non-degree option related to Clark's "BA/MA" program). Graduate students may also be able to complete a program during a single academic year. Interested students should contact the appropriate program director in the Education Department at the earliest possible date to discuss program details and planning. The basic requirements for each program are listed below:

**Elementary (Grades 1-6)
Provisional Program**

ED 152 Complexities of Urban Schooling (required for undergraduates only)

ED 264 Designing Instruction for the Developmental Needs of the Child

ED 282 Ways of Knowing in the Arts and Humanities

ED 283 Ways of Knowing in the Social Sciences

ED 284 Ways of Knowing Through Language and Literacy

ED 286 Ways of Knowing in the Physical and Natural Sciences

ED 287 Ways of Knowing in Mathematics

ED 288 Practicum and Seminar in Elementary Education

**Middle School (Grades 5-9)
Provisional Program**

ED 190 Section 1 Experience of Pre-Adolescence

ED 270 Section 1 Becoming an Effective Middle School Educator

ED 271 Section 1 Cultures of the American Middle School

______ *"Ways of Knowing" course corresponding to teaching field (see list above)*

ED 278 Practicum: Middle School Education

**Secondary (Grades 9-12)
Provisional Program**

ED 190 Section 2 Experience of Adolescence

ED 270 Section 2 Becoming an Effective Secondary School Educator

ED 271 Section 2 Cultures of the American Secondary School

ED 272 Section 2 Focusing on a Discipline: High School

Master's in Urban Education and Teacher Research ("Standard" Teacher Certification Programs)

The masters program in Urban Education and Teacher Research is designed to meet state requirements for the standard teaching certificate at the elementary, middle, and secondary levels for those who have achieved the provisional certificate with advanced standing. It will also serve teachers who are already fully certified.

For full-time students seeking standard certification, including undergraduates who qualify for the five-year "BA/MA" program in education, this one-year, ten course program provides a well-rounded, balanced set of complementary experiences: core courses in the areas of culture, language, teaching and teacher research; field experiences in professional development schools under the guidance of education faculty and expert practitioners; intensive summer institute courses; course work in a student's teaching field; a teacher research project and report. Part-time students who are already fully certified substitute additional course work for field experiences.

Master's Required Courses

ED 309 Introduction to Teacher Research (.5 unit)

ED 311 Teaching and Learning (.5 unit)

ED 327 Culture, Language, and Education (1 unit)

ED 367 Clinical Field Experience and Seminar I (1 unit)

ED 368 Clinical Field Experience and Seminar II (3 units)

In addition, full-time students seeking standard certification normally take two summer institute courses and two additional courses during the academic year. At least two of these remaining four courses must correspond to a single subject area if at the elementary level; at least three of the four must correspond to a student's teaching field if at the middle or secondary level. Part-time students who are already fully certified take additional course work in lieu of field experience. All of the courses for full- or part-time students must be determined in consultation with the program director or teacher education program assistant.

SPECIAL PROGRAMS

Office for Children Licensing Program

The Education Department at Clark University offers interested students the opportunity to become licensed pre-school "lead" teachers in private facilities and day care centers under guidelines set by the Commonwealth of Massachusetts. For licensing under the Office for Children, students major in an academic discipline and take four to six credits in child development, curriculum, families, and the teaching of young children. Students then complete a two-credit internship at the kindergarten or pre-school level. Individual advising is necessary; please see the coordinator of the OFC program.

OFC "Lead" Teacher Sequence

Required Courses:

Ed 184 The Early Childhood Educator

Psych 150 Child Development

Ed 289 Practicum in Early Childhood

Choice of at least two additional courses to complete OFC requirements.

Human Services Program

This four-course sequence is designed for students interested in pursuing a career and/or graduate study in education and the helping professions. Students will have course work and field experiences dealing with diverse groups including children, families, and the aged and in settings which include schools, the court system, mental health agencies, and institutions. Students will acquire conceptual as well as experiential skills through a balance of study and applied field work. Interaction with a variety of human services providers and systems in the Worcester area will serve to integrate material from the sequence.

Students receive an official transcript notation documenting the completion of this program.

Any year

ED 155	*Education and Social Policy*
ED 194	*Field Experience I*
ED 195	*Field Experience II*
ED 269	*The Skilled Helper*

School Psychology Program

This four-unit sequence provides intensive first level training for students in the junior and senior years considering advanced graduate work in school psychology and related professional fields. Students are required to complete a two-semester placement for 10 hours a week under the supervision of a school counselor/social worker/school psychologist. Students receive an official transcript notation documenting the completion of this program.

Any year

Ed 266 Analysis of Individual Ability and Style

Ed 268 Section 1 Psychoeducational Methods Semester I

Ed 268 Section 2 Psychoeducational Methods Semester II

■ COURSES

105 FIRST-YEAR SEMINAR: NATURE AND BASIS OF MORAL DEVELOPMENT/ LECTURE, DISCUSSION

Mr. Zern/Offered every year

152 COMPLEXITIES OF URBAN SCHOOLING/LECTURE, DISCUSSION

Analysis of current challenges facing educators in America's urban schools using linguistic, sociological and psychological perspectives. Required of undergraduate students in the elementary provisional certification program. Mr. Gee, Ms. Michaels/Offered every year

155 EDUCATION AND SOCIAL POLICY/LECTURE, DISCUSSION

Examines the relationship between social problems, social policy, and education. Conceptual tools for the analysis of social policies are utilized. Examinations of existing programs and social agencies enable students to understand agency functions, client population, and the relationship between the individual agency and the larger social service network. Emphasis is placed on social problems and "social solutions," linking individuals and external primary groups with societal resource systems, and the impact of social policy change on individuals and institutions. Mr. Seale /Offered every year

190 SECTION 1 THE EXPERIENCE OF THE PRE-ADOLESCENT/

LECTURE, DISCUSSION

Explores pre-adolescent development primarily through theory and research drawn from the behavioral and social sciences. Students study and discuss topics of central importance to education during the pre-adolescent years. Special social and interpersonal problems and issues confronting today's adolescent are considered, as well as relevant teaching and learning theories. Students apply the course material to both teaching and learning in a series of descriptive and analytic reports applied to middle school education. Mr. Zern/Offered every year

190 SECTION 2 THE EXPERIENCE OF ADOLESCENCE/LECTURE, DISCUSSION

Explores adolescent development through theory and research drawn from the behavioral and social sciences and including some fiction as well. Students study and discuss topics of central importance to education during the adolescent years. Special social and interpersonal problems and issues confronting today's adolescent are considered, as well as relevant teaching and learning theories. Students apply the course material to both teaching and learning in a series of descriptive and analytic reports applied to high school education. Mr. Zern/Offered every year

194-195 FIELD EXPERIENCE: SPECIAL EDUCATION AND HUMAN SERVICES/DISCUSSION, FIELD PLACEMENT

These courses provide direct, supervised experience within a wide range of educational and human services agencies. Placements are based upon assessment of students' experience, goals, and academic backgrounds. Placement possibilities include schools, mental health centers, institutions, the courts, substance abuse centers, crisis agencies, and group homes. A concurrent weekly seminar provides the opportunity for students to analyze their field work experience. Special note: These courses may be taken as a full-year, two-course sequence (Education 194 *and* 195) or as a single course either semester (Education 194). Mr. Seale/Offered every year

252 YOUNG CHILDREN AND THE ARTS/LECTURE, DISCUSSION, STUDIO

The development of children's abilities to express themselves through varied symbolic forms is examined. There also is studio time during which students are asked to express themselves using different media. Classroom instructional applications at the early childhood and elementary levels are explored. No prerequisites. Ms. Fisher/Offered periodically

254 DISCOVERING PHYSICS/LABORATORY

Refer to course description under Physics 102. Education 254 is open to education graduate students only. Undergraduate students need to register for Physics 102. Mr. Blatt, Mr. H. Gould, Mr. M. Gould/Offered every year

256 THEATER IN THE CLASSROOM

This course, designed for both classroom teachers and advanced-level theater and education majors, provides experience using drama and creative arts techniques in the classroom. This will involve creating a children's theater production to be performed at area schools, and developing curriculum which explores issues raised in the production. Cross-listed with TA130-31. Ms. Trachtenberg/Offered periodically

257 INTRODUCTION TO HUMAN LANGUAGE/LECTURE, DISCUSSION

This course is an introduction to contemporary linguistics and related fields for upper division undergraduates and beginning graduate students pursuing work in areas where language and communication is an important focus. The course will cover work on the structure of language (with special regard to English), language universals, how languages change in time, how they are acquired by children and adults, language in the brain and how language is produced and comprehended (psycholinguistics), the relationships between language, society, and culture (sociolinguistics and anthropological linguistics), and the nature of communication in modern societies and its characteristic institutions with special reference to schools and schooling, as well as to issues such as language and gender, and communication in multicultural societies. Mr. Gee/Offered periodically

260 LITERACY DEVELOPMENT/ LECTURE, DISCUSSION, 'SEMINAR

Provides an overview of the development of reading, writing, and literacy-related oral language abilities from the preschool years through high school. Linkages between oral and written skills and between reading and writing are examined. Special attention is given to the impact of cultural, home, and instructional experiences on literacy skills. Mr. Dickinson/Offered periodically

264 DESIGNING INSTRUCTION FOR THE DEVELOPMENTAL NEEDS OF THE CHILD/LECTURE, DISCUSSION, CLASS EXERCISES

Lectures and classroom exercises are used to (1) examine some central knowledge structures children acquire during the preschool and elementary years and the ways these structures influence school learning; (2) examine the ways these structures develop and the forms they assume for typical and atypical children; and (3) provide opportunities for students to develop skills in developmental assessment and instructional programming. In course exercises and assignments, students use their understanding of children's development to design classroom and remedial learning activities that meet children's individual needs. Ms. Griffin/Offered every year

265 EMOTIONAL DEVELOPMENT/SEMINAR

This course examines what emotions are and how they develop from birth to adulthood. Particular emphasis is placed on emotional development during the childhood years; on the ways emotions are shaped by cognitive, social, and biological factors; and on the ways emotions themselves shape learning and behavior. Ms. Griffin/Offered every year

266 ANALYSIS OF INDIVIDUAL ABILITY AND STYLE/ LECTURE, DISCUSSION, PRACTICUM

The goal of this course is for students to become competent in the use of a variety of techniques in order to understand the individual as a whole. In the course, students will become thoroughly familiar with the theory of individual assessment, some tools for assessment, and the analysis of assessment data. Focus is placed on understanding, administering, and interpreting both traditional and alternative assessment tools, including measures of cognitive ability, scholastic achievement, and personality. Students are required to administer a variety of assessment procedures and to analyze and integrate the diverse set of results in a number of case histories. Mr. Zern/Offered every year

267 ROLE OF VALUES IN EDUCATION/ LECTURE

This course will explore the variety of roles values play in the educating process. First, a classification of values will be developed. Next, a variety of models will be explored to understand how values develop in a society. Then, selected descriptive, empirical, and theoretical analyses will be considered in order to understand the impact values have on other behaviors. Finally, students will develop and systematically explore the interaction of values and educating in a setting of their own choice. Mr. Zern/Offered every year

268 SECTION 1 & 2 PSYCHOEDUCATIONAL PRACTICUM AND SEMINAR /SEMINAR, FIELD PLACEMENT

This field-based course provides a two-semester placement, eight to ten hours a week, with the pupil personnel department of a public school system. Each student is placed with a school psychologist and/or a counselor who functions as an ongoing supervisor. Practicum activities include supervised experience in conducting and interpreting psychoeducational assessments, obtaining social and developmental history information through home visits, and observing and participating in the development of individualized educational plans as part of the team evaluation process. Mr. Seale/Offered every year

269 THE SKILLED HELPER/ LECTURE, DISCUSSION, PRACTICUM

An introductory experience designed for the development of the helping professional. Emphasis is placed on dynamics of the helping relationship and basic interviewing skills. Class exercises are utilized to facilitate skill development. Students who are not concurrently taking a field course are placed in a human service agency one half-day per week. Mr. Seale/Offered every year

270 SECTION 1 BECOMING AN EFFECTIVE MIDDLE SCHOOL EDUCATOR/LECTURE, DISCUSSION, FIELD EXPERIENCE SEMINARS

This course will investigate the teaching process as a dynamic, complex human endeavor requiring the mastery of a variety of skills and the acquisition of a specific knowledge base. Mr. DelPrete/Offered every year

270 SECTION 2 BECOMING AN EFFECTIVE SECONDARY EDUCATOR/LECTURE, DISCUSSION

Refer to EDUC 270 Section 1 for description. Mr. Mastrorio, Mr. McDermott/Offered every year

271 SECTION 1 CULTURES OF THE AMERICAN MIDDLE SCHOOL/LECTURE, DISCUSSION, SCHOOL VISITS

The primary objective of this course is to have students construct their own conceptions of a culturally responsive middle school setting. In order to arrive at that point, students will consider the several factors that constitute the cultures of the middle school. These include the ecology of the classroom, the structural factors that determine cultural forms, the communication of values and the issue of student diversity. In doing this, the course will emphasize that examining the multicultural composition of classrooms is critical to understanding the school's culture. Mr. Ameer/Offered every year

271 SECTION 2 CULTURES OF THE AMERICAN SECONDARY SCHOOL/LECTURE, DISCUSSION, SCHOOL VISITS

The primary objective of this course is to have students construct their own conceptions of a culturally responsive setting. In order to arrive at that point, students will consider the several factors that constitute the cultures of the high school. These include the ecology of the classroom, the structural factors that determine cultural forms, the communication of values and the issue of student diversity. In doing this, the course will emphasize that examining the multicultural composition of classrooms is critical to understanding the school's culture.Mr. Ameer/ Offered every year

271 SECTION 3 CULTURES OF AMERICAN SCHOOLS/LECTURE, DISCUSSION, SCHOOL VISITS

Refer to EDUC 271 Section 1, 2 for description Mr. Ameer/Offered every year

272 SECTION 1 FOCUSING ON A DISCIPLINE IN THE MIDDLE SCHOOL/LECTURE, DISCUSSION, FIELD EXPERIENCE

This course will investigate the teaching process by direct observation of and cooperative interaction with practitioners in a middle school. Students will acquaint themselves with a variety of aspects of a high school to acquire a sense of the community make-up of a particular school. Students will observe and work with teachers in their subject area and will volunteer to aid in class, in correcting papers, in labs, in tutoring, and in preparing worksheets. Students will also teach one class. Mr. Mastrorio, Mr. McDermott/Offered every year

272 SECTION 2 FOCUSING ON A DISCIPLINE IN THE SECONDARY SCHOOL/LECTURE, DISCUSSION, FIELD EXPERIENCE'

This course will investigate the teaching process by direct observation of and cooperative interaction with practitioners in a secondary school. Students will acquaint themselves with a variety of aspects of a high school to acquire a sense of the community make-up of a particular school. Students will observe and work with teachers in their subject area and will volunteer to aid in class, in correcting papers, in labs, in tutoring, and in preparing worksheets. Students will also teach one class. Mr. Mastrorio, Mr. McDermott/ Offered every year

273 SCIENCE AND SOCIETY

This course deals with the construction of knowledge and authority in the physical and biological sciences. Knowledge is viewed as something that is actively created and contested in the interactions of scientists among themselves, with the things they study, with the tools they use, as well as with the wider society and cultures they are a part of. We will look at processes of change in science, how science is situated in history, the mutual influences between science and culture, and characteristic forms of thinking and practice in different branches of science (primarily physics and biology), as well as how these compare to forms of thinking and practice in other human endeavors. The course will integrate themes from the philosophy, history, and the sociology of science, as well as science and technology studies, and will focus, as well, on the nature of "scientific literacy" and issues germane to the teaching and learning of science in schools. Mr. Blatt, Mr. Gee/Offered periodically

278 PRACTICUM: MIDDLE SCHOOL EDUCATION

This course will integrate 150 hours of field work with group professional development activities such as "rounds" and seminar discussion focused on middle school education. Students will be supervised by education faculty and/or professional development school teachers. For students who have already qualified for the secondary provisional certificate with advanced standing and wish to qualify for the same at the middle school level. Mr. Del Prete/offered every year

279 PRACTICUM: SECONDARY EDUCATION

This course is the culminating experience for the secondary provisional certification candidate. Students complete at least 300 hours of field work with corresponding seminars and conferences. Please note that this course is worth 3 units. Mr. Zern/Offered every semester

281 THE EARLY CHILDHOOD EDUCATOR: THEORY AND PRACTICE/SEMINAR, FIELD PLACEMENT

This course introduces students to Early Childhood Education. Each student spends six hours a week in a field placement and attends a weekly two-hour seminar. Day care centers, nursery schools, and kindergartens are considered field sites. Seminar sessions address the nature of the developing child from infancy to age eight, the early childhood curriculum, the role of the teacher, and the effects of family and society on the learning child. Ms. Myers/ Offered every year

Ways of Knowing Courses

The Education Department at Clark sponsors a concentrated set of inter-related courses organized around the theme "Ways of Knowing." Each course in the series deals with the construction of knowledge in individual development, in academic disciplines, in schools, and in the society at large. Each course will focus on a few fundamental themes or "big ideas" in the area, giving students a good grasp of what an important piece of "content" looks like in each domain. Each course will look at leading ideas through a variety of different, but complementary perspectives, including for each course: the nature of knowledge in the area, the historical development of this knowledge, social and cultural ramifications, ways of working, thinking and using language in the area, comparison to other ways of knowing, as well as ways of learning and teaching in the area. Each course in the series will involve traditional in-classroom work, as well as observation, activities, and research in the field, either in classrooms or other learning or organizational settings. The courses will usually be co-taught by faculty from a variety of areas, as well as by master teachers from the Clark Professional Development School Collaborative.

282 WAYS OF KNOWING IN THE ARTS AND HUMANITIES/LECTURE, DISCUSSION, FIELD PLACEMENT

Staff/Offered every year

283 WAYS OF KNOWING IN THE SOCIAL SCIENCES/LECTURE,

DISCUSSION, FIELD PLACEMENT
Staff/Offered every year

284 WAYS OF KNOWING THROUGH LANGUAGE AND LITERACY/ LECTURE, DISCUSSION, FIELD PLACEMENT

Staff/Offered every year

286 WAYS OF KNOWING IN THE PHYSICAL AND NATURAL SCIENCES

Lecture, Discussion, Field Placement
Staff/Offered every year

287 WAYS OF KNOWING IN MATHEMATICS/LECTURE, DISCUSSION, FIELD PLACEMENT

Staff/Offered every year

288 PRACTICUM AND SEMINAR IN ELEMENTARY EDUCATION

This integrated internship provides an intensive experience in elementary schools (grades 1-6) in the Worcester area. It involves a full-time, supervised practicum (at least 300 hours), seminars, and conferences. Staff/ Offered every year

289 PRACTICUM IN EARLY CHILDHOOD EDUCATION

Provides an intensive experience in the early years (N-K) in the Worcester area. It involves a 150-hour, supervised practicum, including theoretical course work, seminars, and conferences. The practicum includes a weekly seminar. Staff/Offered every year

299 SECTION 1 DIRECTED READINGS — UNDERGRADUATE

Independent study for qualified students on a selected topic. Permission of instructor required. Offered for variable credit. Staff/ Offered every year

299 SECTION 2 DIRECTED RESEARCH — UNDERGRADUATE

Staff/Offered every year

299 SECTION 4 FIELD PROJECT — UNDERGRADUATE

Provides individualized and extended experiences in a wide variety of educational and human service agencies and institutions. Supervision is provided by the University and field agency personnel. Combines related seminars, conferences, and readings as a basis for critical analysis of the experiences within the context of applied theory and practice. Offered for variable credit. Staff/Offered every year

304 TEACHING AS RESEARCH SEMINAR I (FALL)

These seminars, meeting on a continuing basis, bring together urban school teachers (at the elementary, middle, and secondary level) with graduate students and faculty involved in university-based educational research. The focus of discussion and reading is qualitative, sociolinguistic research in classrooms, emphasizing the study of talk and texts, as a vehicle for 1) better understanding students' understanding, 2) developing systematic techniques for describing and critiquing classroom activities, and 3) supporting change in the classroom that promotes more effective learning among a socioculturally diverse population of students. Participants meet in small, facilitated groups to carry out qualitative research in urban classrooms and develop forums through which their work can be disseminated to a wider community of teachers and researchers. Staff/Offered every year

305 TEACHING AS RESEARCH SEMINAR II (SPRING)

Refer to EDUC 304 for description.

306 CREATING LITERACY ENVIRONMENTS IN ELEMENTARY SCHOOLS/SEMINAR

This course, designed for classroom teachers and full-time students, reviews recent studies reporting efforts to establish classrooms rich with varied opportunities for children to use language and literacy. Implications of this research for instruction are considered, and classroom practice is examined in light of it. Teams of students (e.g., a classroom teacher and a full-time graduate student, or two classroom teachers) identify and examine issues related to language and literacy use in classroom practice. Those who are interested try novel methods and examine the effects of these innovations. Mr. Dickinson/Offered periodically

309 INTRODUCTION TO TEACHER AS RESEARCHER/ LECTURE, DISCUSSION

Students will be introduced to qualitative research as a tool for inquiring into and understanding teaching practice and children's learning. Ms. Michaels/Offered every year

311 TEACHING AND LEARNING/ SEMINAR, DISCUSSION

This course challenges a theory which informs much of the teaching and curriculum development in schools and consequently the learning experience of students, namely: that there is one best way of understanding, that students must learn according to that one way, and that their capacity to learn ought to be judged accordingly. It is built on the premise that there are many adequate pathways for understanding subject matter and that teachers who acknowledge and support different pathways with students make learning more accessible. The experiences provided through the course form a basis for exploring this premise and its implications for teaching, curriculum, assessment, the formation of learning communities for diverse groups of students, and the role of the teacher in enabling students to actively construct knowledge. Mr. Del Prete/Offered every year

313 STUDIES IN MIDDLE SCHOOL TEACHING AND CURRICULUM/ SEMINAR, DISCUSSION

Mr. Del Prete/Offered periodically

324 BUILDING CONCEPTUAL BRIDGES/LECTURE, SEMINAR

Ms. Griffin/Offered periodically

325 RECENT THEORETICAL ADVANCES IN INTELLECTUAL DEVELOPMENT AND THEIR IMPLICATIONS FOR EDUCATION; A CASE STUDY FROM THE DOMAIN OF MATHEMATICS/ LECTURE, SEMINAR

In this seminar, participants will become acquainted with contemporary theories in the field of intellectual development, their application to the domain of mathematical reasoning, and the general intellectual tradition (empiricist, rationalist, sociohistoric) and interpretive frameworks within which this work has been conducted. The relevance of this work for understanding the practice of education in the United States today, and in suggesting directions for its improvement, will also be discussed. Ms. Griffin/Offered periodically

327 CULTURE, LANGUAGE, AND EDUCATION

This is a graduate level course dealing with theories and practices relevant to teaching and learning within a sociocultural perspective. Education today is a crucial area where a great variety of issues and disciplines are focused, including cognitive, linguistic, social, cultural, political, and economic themes. This course deals with questions about language and cognition, multicultural and social diversity in the classroom, curricular and pedagogical theories and practices, language and literacy development, bilingual education, access and equity, learning across the life span, and the politics of education. In all areas, analysis of language and communication is used as a key tool for critical understanding. Mr. Gee/Offered every year

335 ETHNOGRAPHY IN URBAN EDUCATIONAL AND COMMUNITY SETTINGS

This course is an introduction to ethnography and qualitative research methods—at both a theoretical and applied level. Students are introduced to the epistemological and sociohistorical underpinnings of qualitative methods, with emphasis on work appropriate for the study of urban settings. Students also carry out their own ethnographic studies, involving them in the practical work of negotiating entry into the field, data collection, and analysis. In providing methodological tools for ethnographic research, there is an emphasis on the study of discourse (talk and text) in these settings, as the visible nexus of social, cognitive, and institutional forces. This is a graduate seminar, requiring approval of the instructor. Ms. Michaels/Offered periodically

336 CLASSROOM MANAGEMENT/ LECTURE, DISCUSSION

Staff/Offered periodically

341 DISCOURSE ANALYSIS

Mr. Gee/Offered periodically

343 ANALYSIS OF THE RESEARCH PROCESS/LECTURE, DISCUSSION

Focuses on understanding the structure and intent of a research report. The form of the course consists of the careful analysis of existing educational research. Sources are considered in terms of particular elements in their overall structure, including hypothesis formation, operationalization of major terms, research design, etc. Mr. Zern/Offered periodically

348 STATISTICS IN EDUCATION/ LECTURE, DISCUSSION

Mr. Zern/Offered periodically

352 YOUNG CHILDREN AND THE ARTS

Refer to EDUC 252 for description.

360 LITERACY DEVELOPMENT/LECTURE, DISCUSSION, SEMINAR

Refer to EDUC 260 for description.

362 MATH AND/OR EMOTION RESEARCH/SEMINAR

Ms. Griffin/Offered periodically

363 COGNITION AND INSTRUCTION/SEMINAR

In this research seminar, students will take advantage of an ongoing research and development project in mathematics education to investigate the conceptual networks children construct for mathematical concepts, the instructional principles that underlie effective instruction, and the variety of methods that can be used to assess children's learning and development. Each student will conduct an independent research study on a topic of interest. Ms. Griffin/Offered periodically

367 SECTION 1 CLINICAL EXPERIENCE AND SEMINAR I (ELEMENTARY)

367 SECTION 2 CLINICAL EXPERIENCE AND SEMINAR I (MIDDLE SCHOOL)

367 SECTION 3 CLINICAL EXPERIENCE AND SEMINAR I (SECONDARY)

This course will integrate 150 hours of focused field work with group professional development activities such as "rounds" and seminar discussion. Students will be mentored by education faculty and/or professional development school teachers as they broaden and deepen their understanding of particular approaches to curriculum (consistent with local, state, and national curriculum frameworks) and develop expertise in teaching practices (e.g., fostering and assessing literacy development) which engage diverse groups of children, including children with special needs, in active and developmentally appropriate learning. This experience is meant as well to promote students' capacity to build and participate in a professional learning community intent on learning about and reflecting on teaching, children's learning, schooling, and education. For master's students seeking standard teaching certification. Mr. Del Prete/Offered every year

368 SECTION 1 CLINICAL EXPERIENCE AND SEMINAR II (ELEMENTARY)

368 SECTION 2 CLINICAL EXPERIENCE AND SEMINAR II (MIDDLE)

368 SECTION 3 CLINICAL EXPERIENCE AND SEMINAR II (SECONDARY)

This course will integrate 400 hours of field work with group professional development activities such as "rounds," seminar discussion, and teacher research. Students will be mentored by education faculty and/or professional development school teachers as they develop their teaching practice and understanding of children's learning within and across various curriculum areas. Particular emphasis will be placed on ways to develop and support children as active thinkers and knowledge-builders in various domains, on providing multiple paths of learning for children in keeping with diverse needs and ways of knowing, and on creating and sustaining a responsive and responsible learning community. Students will frame and conduct a teacher research project aimed at investigating and building understanding of some aspect of the teaching-learning process. For master's students seeking standard certification. Mr. Del Prete/Offered every year

370 SECTION 1 BECOMING AN EFFECTIVE MIDDLE SCHOOL EDUCATOR/LECTURE, DISCUSSION

Refer to EDUC 270 Section 1 for description.

370 SECTION 2 BECOMING AN EFFECTIVE SECONDARY EDUCATOR/LECTURE, DISCUSSION

Refer to EDUC 270 Section 2 for description.

371 SECTION 1 CULTURES OF THE AMERICAN MIDDLE SCHOOL/ LECTURE, DISCUSSION, SCHOOL VISITS

Refer to EDUC 271 Section 1 for description.

371 SECTION 2 CULTURES OF THE AMERICAN SECONDARY SCHOOL/LECTURE, DISCUSSION, SCHOOL VISITS

Refer to EDUC 271 Section 2 for description.

371 SECTION 3 CULTURES OF THE AMERICAN SCHOOLS/LECTURE, DISCUSSION, SCHOOL VISITS

Refer to EDUC 271 Section 3 for description.

373 SCIENCE AND SOCIETY

Refer to EDUC 273 for description.

377 FACILITATING TEACHER RESEARCH: ETHNOGRAPHIC AND SOCIOLINGUISTIC METHODS

This course is designed to provide theoretical, methodological and applied research training to classroom teachers and graduate student/researchers interested in facilitating teacher research. Readings will include text: 1) about teacher research; 2) by teacher researchers; 3) about theoretical and empirical work on group discussion and the social formation of mind. In addition, participants will be involved in ongoing data collection and analysis of existing teacher research groups. Thus the forum will develop practical skills in group leadership as well as research skills in documenting and analyzing teacher research. This is an advanced seminar for people who have already participated in teacher research and/or facilitating teacher research groups. Permission of the instructor is required. Ms. Michaels/ Offered periodically

378 PRACTICUM: MIDDLE SCHOOL

See description for EDUC 278. Please note that this course is worth 2 units. Mr. Del Prete/Offered every year

379 PRACTICUM: SECONDARY EDUCATION

See description for EDUC 279 Please note that this course is worth 2 units. Mr. Zern/ Offered every semester

381 HUMANITIES SEMINAR: LEARNING AND KNOWING/ LECTURE, DISCUSSION

An interdisciplinary study of the variety of ways we learn and know. The focus is a consideration of the various and often conflicting views of the ideal of the educated person. Mr. Overvold/Offered every year with COPACE

382 WAYS OF KNOWING IN THE ARTS AND HUMANITIES

Refer to EDUC 282 for description.

383 WAYS OF KNOWING IN THE SOCIAL SCIENCES

Refer to EDUC 283 for description.

384 WAYS OF KNOWING THROUGH LANGUAGE AND LITERACY

Refer to EDUC 284 for description.

386 WAYS OF KNOWING IN THE PHYSICAL AND NATURAL SCIENCES

Refer to EDUC 286 for description.

387 WAYS OF KNOWING IN MATHEMATICS

Refer to EDUC 287 for description.

388 GRADUATE PRACTICUM AND SEMINAR IN ELEMENTARY EDUCATION (SEE DESCRIPTION UNDER EDUC 288) NOTE THAT THIS COURSE IS 2 UNITS.

391 THESIS RESEARCH

Individual research related to the doctoral dissertation. Students meet with members of their dissertation committee for assistance with their dissertation study. Advising conferences are scheduled as needed by the individual student with committee members. The chair of the dissertation committee coordinates the advising process. Offered for variable credit to be determined by the dissertation chair. Staff/Offered every year

399 SECTION 1 DIRECTED READINGS — GRADUATE

Independent critical analysis of literature related to individual research. Offered for variable credit. Staff/Offered every year

399 SECTION 2 DIRECTED RESEARCH — GRADUATE

Individual research with direction from an instructor. Offered for variable credit. Staff/Offered every year

Engineering

PROGRAM COMMITTEE

Charles C. Agosta, Ph.D., committee chair, physics

Lee Rudolph, Ph.D., mathematics, computer science

Wen-Yang Wen, Ph.D., chemistry

THE UNDERGRADUATE 3/2 ENGINEERING PROGRAM

The 3/2 engineering program at Clark University is a five-year program offered in conjunction with several affiliated schools. Currently these schools are Columbia University, Washington University, and the Worcester Polytechnic Institute. Students enrolled in this program complete three years in residence at Clark followed by two additional years at one of the engineering schools. Students completing the program receive a B.A. degree from Clark and a B.S. degree in engineering from the affiliated school.

At Clark, students major in a field that strongly overlaps the entrance requirements for the engineering school. Appropriate majors include chemistry; computer science; environmental science and policy; mathematics; physics; and a self-designed liberal-arts/engineering major. At the engineering school, students may major in any of the fields they offer. In addition to the traditional engineering fields taught at all schools, unique programs such as engineering and public policy, biomedical engineering, system science and engineering, and fire protection engineering are also available. Please consult the program chair for further information.

While the program is open to all Clark students, the required curriculum must be started during the first year of study to permit the timely completion of all requirements. Those students whose high school background (as determined by placement examinations) has not prepared them to enter calculus (Mathematics 120) and composition (English 020) during their first semester must attend summer school to complete the requirements on time. All students intending to pursue the program are required to notify the program chair of their intent at the beginning of their first year and to choose their courses each semester in consultation with committee members.

Students are encouraged to seek a major advisor who is familiar with the program and to seek the advice of members of the 3/2 Engineering Committee. Sample curricula for appropriate majors can be obtained from the committee chair. Students intending a self-designed liberal arts/engineering major may wish to use the 3/2 Engineering Committee as their major advisory committee.

■ REQUIREMENTS

In addition to the requirements of the Program of Liberal Studies and of their major at Clark (indicated elsewhere in this catalog), students must meet the entrance requirements of the engineering school. These requirements, which are essentially the same for all schools, are indicated in the following chart with the equivalent Clark course. Detailed questions concerning individual schools can be discussed with committee members.

The additional Clark requirements for the liberal arts major and for the Program of Liberal Studies must be met concurrently with the above requirements. Several majors require additional summer school work at Clark or advanced placement standing to complete all requirements within the three-year period in residence at Clark. Students who complete a full year of study at the engineering school and who have completed all of Clark's requirements are eligible for the B.A. at the end of the fourth year of study.

■ ENROLLMENT AT THE ENGINEERING SCHOOL

Students submit a formal application for admission to the engineering school through the 3/2 Engineering Committee during their junior year. Students receiving a positive endorsement from the committee normally can expect admission for enrollment as juniors at the engineering school in the following September. Application for financial aid is made at the same time, and those students receiving financial aid can expect to be supported at levels that are generally consistent with the level of Clark's support during the first three years. However, only Washington University awards financial aid to foreign students, who must rely on other sources of funds while at Columbia or WPI.

Students intending to enroll at WPI should apply as sophomores and may enroll in some engineering courses during their second or third year while still at Clark. Washington University encourages prospective students to enroll in one of their intensive January courses between Clark's first and second semesters.

Columbia entry requirements	*Clark equivalent*
Mathematics	
Calculus (3 terms)	Math 120/121/131
Ordinary Differential Equations	Math 244
Physics	
General Physics (4 terms)	Phys 110/112/113/114
Chemistry	
Chemistry with lab (2 terms)	Chem 101/102
Computer Science	
One programming language	CSci 101 or 115
English	
Composition (one term minimum)	Eng 019 or 020
Economics	
One term minimum	Econ 010
Humanities and Social Sciences	
5 additional courses	Perspective courses outside the sciences
Physical Education	
Two terms	Any team athletic sport is acceptable

English

DEPARTMENT FACULTY

Serena S. Hilsinger, Ph.D.: chair: modernist literature, women writers

Thomas F. Berninghausen, Ph.D.: American literature, modernism, literary theory

Charles S. Blinderman, Ph.D.: science and literature, Victorian literature, etymology

John J. Conron, Ph.D.: American literature, American landscape, American culture, fine arts

James P. Elliott, Ph.D.: American literature, literary theory, textual editing

SunHee Kim Gertz, Ph.D.: Chaucer, medieval literature, literary theory

Fern L. Johnson, Ph.D.: sociolinguistics, feminist linguistics, communication

Winston Napier, Ph.D.: African American literature, literary theory

Leone Scanlon, Ph.D.: director of writing center: composition

Stanley Sultan, Ph.D.: modernist literature, literary theory, Anglo-Irish literature

Virginia M. Vaughan, Ph.D.: Shakespeare, Renaissance drama, Renaissance poetry and prose

David F. Venturo, Ph.D.: English literature, 1660-1830; history and literature

ADJUNCT FACULTY

William Ferguson, Ph.D., associate professor of Spanish

Bernard Kaplan, Ph.D., professor of psychology

PART-TIME FACULTY

Derek Alwes, Ph.D.

E. Jeanne Braham, Ph.D.

M. Elizabeth Couvares, M.Ed.

Robert S. Davis, Jr., Ph.D.

Anne Goble, M.A.

Paul Wilkes, M.S.

Lucilia Valerio, Ph.D.

EMERITI

William H. Carter Jr., Ph.D.

Jessie C. Cunningham, Ph.D.

UNDERGRADUATE PROGRAM

The program is designed to meet the needs and interests of nonmajors as well as English majors and minors. We aim to assist all students in developing skills in close reading, critical thinking, and effective writing, as well as in acquiring knowledge and experience valuable to any vocation. The program encourages the development of a sense of cultural history, a sensitivity to literary values, and a firsthand knowledge of important authors, works, and periods of literature in English.

During the first year, the prospective English major may wish to take, or to begin, a two-semester historical sequence. These include English Poetry (110-111); English Drama (122-123); English Fiction (131-132); Fiction by Women Writers (133-134); and Major American Writers (180-181). In the sophomore year, English majors normally continue their work in these historical overviews. Also during this year, the student selects—in consultation with an advisor and other appropriate members of the staff—a suitable area of specialization. An area of specialization, a required part of the English major, permits each student to choose from a wide variety of recommended courses, both inside and outside the English Department, that are related to the particular periods, themes, or activities appropriate to the student's special interests. The department encourages extensive and intensive consultation between majors and their advisors.

A summary of the basic program for all English majors follows; it should be noted that some courses fulfill more than one requirement and that some courses may be taken at Assumption College and the College of the Holy Cross, through an arrangement with the Worcester Consortium for Higher Education.

The English Department is part of the Alice Coonley Higgins School of Humanities.

SUMMARY PROGRAM FOR ENGLISH MAJORS

Nonrequired Preparatory Courses include:

IDND 018 Expository Writing/Workshop

019 The Essay: Reading and Writing/Workshop

020 Introduction to Literature and Composition/Discussion

General Requirements:

A. *110 English Poetry I*

B. Two of the following four historical groupings of courses:
110-111 English Poetry I & II;
122-123 English Drama;

131-132 English Fiction; or 133 Fiction by Women Writers, 1688–1899, and 134 Modern Fiction by Women Writers; 180-181 Major American Writers

C. One 200-level seminar in criticism from the following: 241 Mythopoetic Mode; 244 Interpretation of Dreams and Other Products of the Imagination; 245 The Creative Process; 246 Psychology, Literature, and Language; 247 Symbolization and Symbolic Action; 248 Contemporary Literary Theory; 249 Signs and Crossroads: Semiotic Theory and Practice; 264 Rise of the Sublime; 281 American Literary Renaissance; 340 Introduction to Graduate Study in English; 251 Seminar in Literary Criticism (refer to course description 251, under Comparative Literature).

D. Period Requirements:
To develop greater historical perspective and awareness of the range and variety of literature written in English, all majors must take at least:

1. Two full courses or seminars dealing with English literature written before 1700. (One of these courses may be a 100-level, i.e.: 120 Introduction to Shakespeare; 111 English Poetry II; 122 English Drama; or 150 Medieval Literature). The 200-level courses fulfilling this requirement include: 250 Medieval Literature; 251 Chaucer; 253 Advanced Studies in Shakespeare; 255 Studies in the Renaissance; 258 Saints, Sinners, and Supermen; 296 Women Mirrored in East and West; and 294 History of the English Language.

2. Two full courses or seminars dealing with English or American literature written between 1700 and 1900. (One of these courses may be 100-level, i.e.: 123 English Drama; 131 or 132 English Fiction; 133 Fiction by Women Writers; 162 Satanic Heroes from Milton to the Brontes; 163 Gothic Fiction; 180-181 Major American Writers). The 200-level courses fulfilling this requirement include: 260 Special Topics in Eighteenth-Century Literature; 261 The Augustan Age; 262 Jane Austen; 263 British Romantic Literature; 264 The Rise of the Sublime; 265 Victorian Literature I; 266 Victorian Literature II; 267 Darwinism in Literature; 280 Early American Novel; 281 American Literary Renaissance; 283 Visions of Representation, 1860-1920; 282 Studies in Nineteenth-Century American Literature; 288 Art of the City, Paris and New York.

E. During the sophomore year, in consultation with an advisor, the English major selects an area of specialization. Majors must take seven courses in their chosen area of specialization. Descriptions of areas of specialization with lists of required and recommended courses are available from the department. Areas of specialization include literature written before 1700, eighteenth century and Romantic literature, American literature, Victorian literature, and twentieth-century literature. The department also offers areas of specialization which link to the University's concentrations in communication studies, education, and women's studies. Students wishing to double major may make the second major the basis for their area of specialization. In consultation with at least two members of the department faculty, English majors may design their own areas of specialization.

F. Every major's program must include at least four full-semester courses at the 200-level in English, in addition to the required seminar in criticism ("C." above). A student may count any of the courses listed under Comparative Literature toward the English major. In all cases, such electives must be approved by the student's advisor in the English Department as being meaningfully related to the student's overall program of English studies. The 200-level courses of the Comparative Literature Program such as Comparative Literature 230, 240, and 251 are especially recommended.

REQUIREMENTS FOR AN ENGLISH MINOR

A minor, in contrast to an area of specialization, provides a student majoring in another department with a general background in literature written in English, as well as skills in critical reading and writing. Students who wish a minor in English must take at least six English courses, not including English 20, Introduction to Literature and Composition. These courses must be selected according to the following guidelines:

1. At least one course in poetry.
2. One historical survey (two courses) from the following:
   English 122 and 123: English Drama
   English 131 and 132: English Fiction
   English 133 and 134: Fiction by Women Writers and Modern Fiction by Women Writers
   English 180 and 181: Major American Writers
3. One seminar in criticism from the following:
   English 241: Mythopoetic Mode
   English 248: Contemporary Literary Theory
   English 249: Signs and Crossroads: Semiotic Theory and Practice
   English 264: Rise of the Sublime
   English 281: American Literary Renaissance
   English 340: Introduction to Graduate Study in English
4. At least two other English courses, one of which must be a 200-level seminar.

HONORS PROGRAM

Students who wish to take honors in English should identify an area of interest, choose an appropriate honors advisor, and apply to the department chair before the end of the junior year. See English 299 Sec.8, Honors in English, for details.

DIRECTED RESEARCH OPPORTUNITIES

During their junior and senior years, English majors are encouraged to experience professional literary scholarship by engaging in research with a professor of the student's choice. The research may take several forms: it may be funded by a grant; it may be undertaken for course credit; or it may be in the form of a special project. Interested students should contact their advisors to see if such work is suitable to their area of specialization.

INTERNSHIP OPPORTUNITIES

In cooperation with the University's Internship Office, the English Department administers an internship program for juniors and seniors. Internships are available both in University offices and beyond the campus—at newspapers, news departments of radio and television stations, periodical and book publishers, and communication departments. Internships can in most cases be integrated into the student's chosen specialization.

GRADUATE PROGRAM

The program leading to the master of arts degree in English encourages both innovative, individually designed programs of study and traditional study in literature. The deliberately controlled size of the program fosters an atmosphere of intensive intellectual exchange among faculty and students. Teaching assistantships (half-time teaching and half-time study) with tuition remission plus stipends and full- and part-time tuition remission scholarships are available on a competitive basis. For the master of arts, the student must satisfactorily complete at least eight upper-level courses or seminars, which include 340 Introduction to Graduate Study and 397 Master's Thesis. Students are also required to register for and participate in 390 Departmental Colloquium (no course credit) where they will present working hypotheses of their thesis topics. In addition to completion of the master's thesis (397), the student must pass a final oral examination.

COURSE NUMBERS AND LEVELS

The "010-020" designation indicates preparatory writing courses which do not satisfy major requirements. English 020, Introduction to Literature and Composition, and English 019, The Essay: Reading and Writing, satisfy the University's verbal expression requirement.

The "100" designation indicates courses taught at introductory or intermediate levels.

The "200" designation indicates courses taught at the advanced level.

The "300" designation indicates courses taught at the graduate level.

010-020)	
100-109)	
200-209)	Writing courses (includes IDND 018)
110-119)	Genre courses: Poetry
120-129)	Genre courses: Drama
130-139)	Genre courses: Prose narrative
140-149)	
240-249)	Courses in critical theory
150-159)	
250-259)	Medieval and Renaissance literature
160-169)	
260-269)	Eighteenth- and Nineteenth-century literature
170-179)	
270-279)	Twentieth-century literature
180-189)	
280-289)	American literature
190-199)	
290-299)	Language and communication

Writing Program

PROGRAM FACULTY

Leone Scanlon, Ph.D.: director

Several part-time staff, carefully chosen for their teaching experience and expertise, also teach each semester in the writing program.

Writing courses, limited in size to assure attention to each student, are listed as "Interdepartmental/Nondepartmental (IDND)" because the teaching of writing at Clark is considered the responsibility of the entire faculty, not of any one department. IDND 018, listed below, is for some students a prerequisite to courses that meet the University's verbal expression requirement. Verbal expression courses are listed under various departments.

IDND 018 EXPOSITORY WRITING/WORKSHOP

Centered on student writing, the course teaches the writing process, emphasizing revision. Reading and writing assignments concern the study of language in such fields as advertising, journalism, and politics. Students write essays, informal exercises, and a short investigative paper. This course is required of some students. Staff/Offered every semester

IDND 162 WORKSHOP FOR WRITING ASSISTANTS

Limited to and required of students assisting in verbal expressions courses, this workshop focuses on how to facilitate writing groups, diagnose writing problems, and review papers. Ms. Scanlon/Offered every semester

■ DEPARTMENT COURSES

019 THE ESSAY: READING AND WRITING/WORKSHOP

This course provides students with the opportunity to read and discuss contemporary essays and some case studies of essay writing. To improve their style and rhetorical competence, students are intensively engaged in writing processes. The course meets the University's verbal expression requirement. Ms. Scanlon/ Offered every year

020 INTRODUCTION TO LITERATURE AND COMPOSITION/DISCUSSION

This course provides the student with an opportunity for intensive reading and writing about basic elements of poetry, fiction, and drama. Small classes and limited reading lists help establish an atmosphere conducive to significant class discussion; emphasis is placed on writing effectively about literature. This course satisfies the University's verbal expression requirement and is strongly recommended for prospective English majors. No student may take more than one section of English 020. Staff/Offered every year

106 CREATIVE WRITING: FICTION/WORKSHOP

This is a course designed to cultivate and guide student work chiefly in the short story, but students may also work with personal memoirs. Class meetings deal largely with important aspects of the art of fiction; published literary works and student manuscripts are also discussed. Not open to first-year students. Prerequisite: 020, *Introduction to Literature and Composition* or any higher literature course taught in any department or permission of the instructor. Graded only on a credit/no credit basis. Ms. Braham/Offered every year

107 CREATIVE WRITING: POETRY/WORKSHOP

This course focuses on prosody and other elements of poetry, and on the writing of narrative, lyric, and dramatic poems. Not open to first-year students. Prerequisite: 020, Introduction to Literature and Composition or any higher literature course taught in any department or permission of the instructor. Graded only on a credit/no credit basis. Ms. Braham/ Offered every year

110 ENGLISH POETRY I/ LECTURE, DISCUSSION

The sequence 110-111 focuses on the development of the most important forms, themes, and movements in English poetry. This course, required for the English major, emphasizes intensive study and discussion of individual poems. It includes a series of essays on assigned topics and fulfills the University's verbal expression requirement. Ms. Braham, Ms. Goble, Ms. Hilsinger, Mr. Sultan/Offered every semester

111 ENGLISH POETRY II/ LECTURE, DISCUSSION

This is the sequel to English Poetry I. Poetry by Yeats, Dickinson, Wordsworth, Pope, Milton, and a group of Renaissance lyric poets is studied in that order (reverse chronology). Relevant issues in the contexts and art of poetry are considered. Prerequisite: a course devoted to the study of poetry. Mr. Sultan/ Offered every year

120 INTRODUCTION TO SHAKESPEARE/LECTURE, DISCUSSION

Designed for any student who wants an introduction to Shakespeare, this course studies several major plays in detail with an emphasis on performance. At least seven plays are read, including at least one major tragedy. Prerequisite: verbal expression course. Ms. Vaughan/ Offered every year

122 ENGLISH DRAMA I/ LECTURE, DISCUSSION

This course is the first half of a survey of drama and its historical and social context in English-speaking countries. It covers the medieval theater and the drama of Renaissance England to the closing of the theaters in 1642 by the Puritan republic. Prerequisite: verbal expression course. Ms. Vaughan/Offered every other year

123 ENGLISH DRAMA II/ LECTURE, DISCUSSION

This course is the second half of a survey of drama in its historical and social context in the English-speaking countries. It covers the three centuries from the restoration of the monarchy in England and the reopening of the theaters in 1660 to the 1970s. Prerequisite: verbal expression course. Mr. Sultan/Offered every other year

131 ENGLISH FICTION I/ LECTURE, DISCUSSION

The sequence 131-132 explores British narrative and fictive modes from the eighteenth and nineteenth centuries. Writers studied in this course include Bunyan, Defoe, Richardson, Fielding, Johnson, Sterne, Austen, and Mary Shelley. Close attention is paid to texts, their intellectual, historical, and biographical contexts, and to recent critical approaches to prose fiction. Prerequisite: verbal expression course. Mr. Venturo/Offered every other year

132 ENGLISH FICTION II/ LECTURE, DISCUSSION

This course continues the exploration of British narrative and fictive modes. Writers studied include Thackeray, Dickens, George Eliot, Hardy, and the Brontes. Close attention is paid to texts, their intellectual, historical, and biographical contexts, and recent critical approaches to prose fiction. Prerequisite: verbal expression course. Mr. Venturo/Offered every other year

133 FICTION BY WOMEN WRITERS, 1688-1899/LECTURE, DISCUSSION

Authors studied include Behn, Burney, Austen, Bronte, Eliot, Gilman, and Chopin. The emphasis in this course is upon these women authors' and their characters' reactions to, and interactions with, the atmospheres and landscapes of their respective ages. Prerequisite: verbal expression course. Ms. Hilsinger/ Offered every other year

134 MODERN FICTION BY WOMEN WRITERS/LECTURE, DISCUSSION

This course is concerned with works written in the twentieth century that provide portraits of women in all stages and conditions of life, rendered in a broad spectrum of fictional techniques. The selection of authors and works is based on three major concerns: that the literature represent a chronological span, that it preserve a certain thematic coherence, and that it allow ample opportunity for discussion of aesthetic matters. Authors studied include Stein, Mansfield, Woolf, Bowen, Hurston, Porter, Sarton, and Naylor. Prerequisite: verbal expression course. Ms. Hilsinger/Offered every other year

136 CONTEMPORARY NARRATIVES/ LECTURE, DISCUSSION

This is a study of representative narratives selected from American, British, and European writers. Selections include nonfiction, fiction, film, and "non-literary" sources including television in order to examine the nature, structure, impact, and interrelationships of contemporary narratives. Prerequisite: verbal expression course. Mr. Elliott/Offered every year

142 PSYCHOLOGY AS A HUMAN SCIENCE/DIALOGICAL FORMAT

Refer to course description under Psychology 155. Mr. Kaplan/Offered periodically

150 MEDIEVAL LITERATURE/ LECTURE, DISCUSSION

This course introduces western European medieval literature, touching on classical roots and contemporary counterparts in the process. The course concentrates on a different theme each year; examples include: rhetoric and romance in medieval literature; narratology; the shrinking stage in Western literature; the epic hero and the lady lover; and Ovid in the Middle Ages. Students may take the course more than once provided they study a different theme each time. Ms. Gertz/Offered every year

161 SCIENCE AND THE HUMANITIES/FIRST-YEAR SEMINAR

This course will investigate the influence science has had on cultural features such as literature, religion, social affairs, and art. The course will conduct its investigation from ancient pagan times to today, examining achievements such as Egyptian mummification, Arabic alchemy, European Newtonism, and Social Darwinism. It will satisfy both historical perspective and verbal expression requirements. Guest lecturers will address the class. Mr. Blinderman/Offered periodically

162 SATANIC HEROES FROM MILTON TO THE BRONTES/ PROSEMINAR

This course chronicles the development of, and changing response to, the Satanic hero from the time of his invention by Milton in 1667 to Emily and Charlotte Bronte's treatment of this character in 1847. Works read will include Milton's *Paradise Lost*, Marlowe's *Dr. Faustus*, Richardson's *Clarissa*, Blake's *Marriage of Heaven* and *Hell*, Byron's *Childe Harold* and *Manfred*, Mary Shelley's *Frankenstein*, Emily Bronte's *Wuthering Heights*, and Charlotte Bronte's *Jane Eyre*. The course uses the shifts in attitude toward the Satanic hero to explore changing literary and social values from the Restoration to the eighteenth century to the Romantic Period and the Victorian Era. Mr. Venturo/Offered every other year

163 GOTHIC FICTION/ LECTURE, DISCUSSION

This class studies the development of gothic fiction both in England and America from its origins in the eighteenth century to the present. The first half of the semester begins with Horace Walpole's *The Castle of Otranto* (1764) and ends with Jane Austen's parody of gothic fiction, *Northanger Abbey* (1818). Also included are works by Ann Radcliffe, Matthew "Monk" Lewis, Mary Wollstonecraft, and Mary Shelley. The reading of American gothic begins with a selection of short stories by Edgar Allan Poe and Henry James. The remainder of the course tracks twentieth-century American gothic fiction by writers such as H. P. Lovecraft, Victoria Holt, Anne Rice, and Stephen King. Mr. Berninghausen/ Offered every year

172 MODERN DRAMA I/ LECTURE, DISCUSSION

Refer to course description under Theater Arts 153. Mr. Schroeder/Offered every other year

173 MODERN DRAMA II/ LECTURE, DISCUSSION

Refer to course description under Theater Arts 154. Mr. Schroeder/Offered every other year

180 MAJOR AMERICAN WRITERS/ LECTURE, DISCUSSION

The sequence 180-181 takes a historical approach to American literature from Puritanism to the present. This part of the sequence concentrates on early American literature, circa 1620-1860. Texts by Taylor, Edwards, Rowlandson, Franklin, Rowson, Douglass, Emerson, Thoreau, Hawthorne, Melville, and others are read closely. Mr. Berninghausen/Offered every year

181 MAJOR AMERICAN WRITERS/ LECTURE, DISCUSSION

This part of the sequence 180-181 concentrates on the evolution of American literature from circa 1860 to the present. Texts by such writers as Whitman, Twain, Howells, Dickinson, Jewett, Crane, James, Frost, Eliot, Faulkner, and Hemingway are read closely. Prerequisite: verbal expression course. Mr. Conron/ Offered every year

183 AMERICAN POETRY/ DISCUSSION

A study of the work of selected modern American poets, this course is designed to help students extend methods of close analysis learned in English 110 and 111, to study the designs of poetry books and to consider the relations of poetry not only to modernism, but also to broader aspects of American culture. The course will include books by early modernists (William Carlos Williams, Marianne Moore and Langston Hughes, for example); late modernists (Allan Ginsberg, Gwendolyn Brooks, Galway Kinnell, Theodore Roethke, Gary Snyder, Adrienne Rich); and contemporary poets (Rita Dove, Mary Oliver, Amy Clampitt). Mr. Conron/ Offered every other year

190 COMMUNICATION, CULTURE, AND SOCIETY/ LECTURE, DISCUSSION

A core course rather than a survey or introduction, this course focuses on concepts and ideas from several disciplines that contribute to (or criticize) the intellectual foundations of the communications field. Philosophical and humanities-oriented in its approach, the course may include readings by Barthes, Dewey, Lippman, Saussure, and Sontag. Prerequisite: Students must have taken or be taking concurrently at least one other communication course. Staff/Offered every year

191 LANGUAGE DIVERSITY IN THE U.S./LECTURE, DISCUSSION

This course focuses on the ways in which language use and attitudes about language differ in relation to race, ethnicity, gender, and socio-cultural background. We give special consideration to African-American English, male and female language differences, ethnic and social class markers in language, and bilingualism. Topics are approached from sociolinguistic and communicative perspectives. Ms. Johnson/Offered every year

192 ETYMOLOGY/LECTURE, DISCUSSION

The goal of this course is to increase students' vocabularies by up to a thousand words. Students study the history of English from its Indo-European source to contemporary slang and analyze the ways words are adopted and created. After the historical study, the course focuses on the vocabularies of disciplines, such as religion, philosophy, government, art, and biology. Mr. Blinderman/Offered every year

193 THE LANGUAGE OF BIOLOGY/LECTURE, DISCUSSION

In this course, students are to learn Latin and Greek elements that constitute terms in biological studies such as evolution and, especially, medicine. While the course is designed especially for pre-meds, it is interdisciplinary and invites discussion of controversial issues ranging from competing ideas on the creation of living things to abortion, euthanasia, and gender. Mr. Blinderman/Offered every year

195 DOCUMENTARY FILM/ WORKSHOP

Documentary films shown demonstrate the development of this kind of film and filmmaking since its inception. The content, point of view, and technique of each film are analyzed. Films include some made by the instructor. Students write a reaction paper for each of the approximately 12 films shown. In addition, students write a 10-page term paper analyzing a number of related films. The course is designed to make the student a more knowledgeable and critical viewer—or maker—of documentary films. Mr. Wilkes/Offered periodically

202 WRITING FOR MAGAZINES I/ WORKSHOP

Emphasis throughout the course is on researching and writing magazine and newspaper articles. Careful attention is given to all stages of writing a good and publishable article, beginning with rigorous discussion about story ideas and methods for obtaining the necessary information. Students also learn how to "personalize" a story. All stories are written with possible publication in mind. Three stories, varying in length from 1,000 to 2,500 words, are written and extensively rewritten. Reading The New York Times is required; weekly quizzes. Not open to first-year students. Prerequisite: verbal expression course. Mr. Wilkes/Offered every year

203 WRITING FOR MAGAZINES II/ WORKSHOP

This course follows up on skills learned in Writing for Magazines I. Students spend more time on longer stories that require extensive research and reporting. Extensive rewriting of stories is done. The emphasis is on writing stories that have the possibility of appearing in local, regional, or national publications so as to prepare the student for writing professionally upon graduation. Reading The New York Times is required; weekly quizzes. Prerequisite: 202, Writing for Magazines I. Mr. Wilkes/Offered every year

241 THE MYTHOPOETIC MODE/SEMINAR

This course explores the vision and epistemology of mythopoetic literature. Works read and discussed include Shakespeare's *Henriad*, Milton's *Paradise Lost*, Bronte's *Wuthering Heights*, Melville's *Moby Dick*, and works of the modern period. Prerequisite: permission of instructor. Ms. Hilsinger/Offered every year

242 PSYCHOLOGY OF LANGUAGE/SEMINAR

Refer to course description under Psychology 242. Mr. Kaplan/Offered periodically

243 THE PSYCHOLOGY OF LOVE AND HATE IN LIFE AND LITERATURE/DIALOGICAL FORMAT

Refer to course description under Psychology 256. Mr. Kaplan/Offered periodically

244 INTERPRETATION OF DREAMS AND OTHER PRODUCTS OF THE IMAGINATION/SEMINAR

Refer to course description under Psychology 260. Mr. Kaplan/Offered periodically

245 THE CREATIVE PROCESS/SEMINAR

Refer to course description under Psychology 277. Mr. Kaplan/Offered periodically

246 PSYCHOLOGY AND RELATED DISCIPLINES/SEMINAR

Refer to course description under Psychology 284. Mr. Kaplan/Offered periodically

247 SYMBOLIZATION AND SYMBOLIC ACTION/SEMINAR

Refer to course description under Psychology 357. Mr. Kaplan/Offered periodically

248 CONTEMPORARY LITERARY THEORY/SEMINAR

This course historicizes and develops several theoretical approaches to literature in the late twentieth century, most often focusing on one approach and/or theorist. We may also attempt to apply the theory to several literary works. General areas of study are selected from among the following: textual criticism, new criticism, semiotics, phenomenology, psychoanalysis/reader response, structuralism, poststructuralism, feminism, Marxism, postmodernism. Mr. Elliott/Offered every year

249 SIGNS AND CROSSROADS: SEMIOTIC THEORY AND PRACTICE/SEMINAR

This course approaches semiotic theories comparatively. They are examined from a historical point of view, as well as from a theoretical point of view that breaks them down into three different schools (American, French, and Italian). In addition to learning about semiotic theories, the student is also able to practice them in a comparative mode; use in areas such as literature, film, advertising, and drama is addressed and analyzed. Ms. Gertz/ Offered periodically

250 MEDIEVAL LITERATURE/SEMINAR

This course emphasizes literary theory as well as literature of the Middle Ages. The course attempts to achieve a sense of medieval literary culture and uses texts from Europe and Great Britain as well as from the classical period. Texts vary each time the course is offered. Ms. Gertz/ Offered every other year

251 CHAUCER/SEMINAR

This course guides the student through The *Book of the Duchess*, *The House of Fame*, *The*

Parlement of Fowls, some *Canterbury Tales*, and *Troilus and Criseyde*. All texts are taught in Middle English (no prior knowledge of Middle English required). Ms. Gertz/Offered every other year

253 ADVANCED STUDIES IN SHAKESPEARE/SEMINAR

This course explores recent trends in research and criticism of Shakespeare's texts, using at least nine plays as a foundation. Topics and focus vary from year to year, but include feminist, new historicist, and cultural materialist interpretations, performance criticism, and theater history. Ms. Vaughan/Offered every year

255 STUDIES IN THE RENAISSANCE/SEMINAR

This course explores the poets, playwrights, and prose writers who shaped the English literary Renaissance. Authors to be studied may include Thomas More, Philip Sidney, Edmund Spenser, Christopher Marlowe, Mary Wroth, John Donne, William Shakespeare, Elizabeth Cary, George Herbert, Ben Jonson, Thomas Middleton, and John Webster. Their writings are placed in the sociopolitical context of the sixteenth and seventeenth centuries. The focus for 1995 is on the interplay of gender and genre. Prerequisite: permission of the instructor. Ms. Vaughan/Offered every other year

258 SAINTS, SINNERS, AND SUPERMEN: THE ENGLISH RESTORATION, 1660-1700/SEMINAR

This course explores the tension between the libertine, secular, and aristocratic values of the Cavalier authors of the Court of Charles II, and the contemplative, spiritual, and commercial values of their Puritan and Republican opponents by examining how the Cavaliers and Puritans each attempt to define heroism in the period from 1660 to 1700. Authors to be studied include Milton, Bunyan, Dryden, Butler, Cowley, Etherege, Wycherley, Killigrew, Philips, and Rochester. Prerequisite: permission of instructor. Mr. Venturo/Offered periodically

260 SPECIAL TOPICS IN EIGHTEENTH-CENTURY LITERATURE: REACTION AND REVOLUTION, 1660-1800/SEMINAR

This course offers students an opportunity to explore historical and theoretical problems related to the study of English literature from 1660 to 1800. Topics change with each new seminar. Recent topics have included: the background to Frankenstein, political literature of the later eighteenth century, and approaches to Swift. Prerequisite: permission of instructor. Mr. Venturo/Offered every other year

261 THE AUGUSTAN AGE/SEMINAR

This course explores the poetry and prose of the great age of English satire—an age in which "modern" and Renaissance values engage in a terrific clash. Authors to be studied include Dryden, Swift, Gay, Pope, Fielding, Lillo, and Defoe. Works are read closely and placed in literary, political, and intellectual context. Prerequisite: permission of instructor. Mr. Venturo/Offered every other year

263 BRITISH ROMANTIC LITERATURE/SEMINAR

This course examines its subject from different perspectives—philosophical, biographical, and critical. To uncover what the Romantic sensibility is—how it relates to nature, the self, revolution, and society—we study selected works of the major Romantic authors: Burke, Wordsworth, Coleridge, Byron, Shelley, Keats, Hazlitt, the Lambs, DeQuincey. Mr. Venturo/Offered every other year

264 THE RISE OF THE SUBLIME/SEMINAR

This course traces the rediscovery of the Sublime as an aesthetic category in the eighteenth century and its use by eighteenth and nineteenth-century writers. Special attention is paid to the cult of "enthusiasm," the drift toward subjectivism and psychology in literature, the concept of "original genius," and the importance of the "grand" in nature. Authors studied include: Longinus, Alexander Pope, John Dennis, Thomas and Joseph Warton, Edward Young, Samuel Johnson, Edmund Burke, Mary Wollstonecraft, William Wordsworth, Lord Byron, Mary Shelley, and Charlotte Bronte. Mr. Venturo/Offered periodically

265 VICTORIAN LITERATURE I/ SEMINAR

Selections for this course have been chosen to illustrate both Victorian and present interests in matters such as social reform, family values, equality of races, women's liberation, censorship, Jesus as savior, and pop music. Authors studied include Charles Darwin, Charles Dickens, Alfred Tennyson, John Stuart Mill, and Charlotte Bronte, and less familiar but important people such as Henry Mayhew and Harriet Taylor. Mr. Blinderman/Offered every other year

266 VICTORIAN LITERATURE II/ SEMINAR

This course introduces students to both Victorian and present interests in matters such as art-for-art's sake vs. art for the sake of moral improvement, Darwinism vs. creationism, cooperation vs. the pains and pleasures of ruthless competition, and the existence of God vs. atheism. Authors studied include Robert Browning, Thomas Hardy and Oscar Wilde, and less familiar but important people such as Christina Rossetti and Thomas Henry Huxley. Mr. Blinderman/Offered every other year

267 DARWINISM IN LITERATURE/SEMINAR

This seminar is devoted to the study of Darwinism in its several dimensions, biological, philosophical, ethical, religious, political, and economic. It opens with a survey of pre-Darwinian works in natural theology and speculation about evolution, focuses on the writings of the Darwinians (especially Charles Darwin and Thomas Huxley), and concludes with a review of Social Darwinism—the survival of the fittest—in the United States. Reading list includes essays, poems, drama, and fiction; special arrangements for viewing of films. Mr. Blinderman/Offered every other year

272 JOYCE AND LAWRENCE/ SEMINAR

This course is an intensive introduction to the art of the two writers. Poems, short stories, and novels by both are studied. Prerequisite: permission of instructor. Mr. Sultan/ Offered periodically

273 THE IRISH LITERARY MOVEMENT/SEMINAR

This is a course in the inception, development, and effect of the literary movement that, during the end of the last century and the first decades of this century, created a self-consciously Irish literature in English. Writers studied include Yeats, Joyce, Synge, and O'Casey. The cultural, historical, and political backgrounds of Anglo-Irish literature also are studied. Prerequisite: permission of instructor. Mr. Sultan/Offered periodically

274 W.B. YEATS/SEMINAR

This course is an intensive study of the accomplishments of Yeats. The principal concern is his poetry, but attention is given to his dramatic and other writings. Also studied are his thoughts and beliefs, and his cultural role in Ireland and the world during his time. Prerequisite: either a course devoted to poetry, permission of the instructor, or English 273, The Irish Literary Movement. Mr. Sultan/ Offered periodically

275 VIRGINIA WOOLF/SEMINAR

This seminar involves intensive study of Virginia Woolf's major novels, short stories, and essays. The course emphasizes the artistic process as well as the vision of Woolf's work; it considers such issues as Woolf's feminism and critical stance. Prerequisite: permission of the instructor. Ms. Hilsinger/Offered every other year

278 MODERN POLITICAL LITERATURE/SEMINAR

This is a seminar devoted to political fiction, poetry, and plays of the past century, principally in the United States, Great Britain, Ireland, France, Germany, Czechoslovakia, Spain, and Latin America. Works advocating and attacking political formulations about class, race, and sex are studied. No prior knowledge of politics or political theory is necessary. Prerequisite: permission of instructor. Mr. Sultan/ Offered every year

280 EARLY AMERICAN NOVEL/SEMINAR

This course traces the development of the American novel from the publication of the first American novel in 1789—William Hill Brown's *The Power of Sympathy*—to the first great popular and commercial successes of the American novel in the 1820s and '30s. Our reading of these works will focus on the twin questions of how they both reflect and portray the culture from which they emerge. We will consider the politics of reading, the history of literacy in America, and the economics of literary production in terms of the writing, publishing, and distribution of books. The second half of the course will concentrate on the rise of the historical romance in America and the ways in which authors of American historical romance sought in the wake of the American Revolution to construct a specifically American past. Prerequisite: permission of instructor. Mr. Berninghausen/Offered periodically

281 AMERICAN LITERARY RENAISSANCE/SEMINAR

This course focuses on the turbulent decade of the 1850s. Canonized male writers—long understood as the first Americans to produce significant literature—will be read in combination with their much more popular female counterparts. In creating a dialogue between representative works of Nathaniel Hawthorne, Fanny Fern, Susan Warner, and Herman Melville, we will consider both questions of social history regarding the construction of gender in the American 1850s and questions of canonicity and the specific qualities that define the "literary" text. Prerequisite: permission of instructor. Mr. Berninghausen/Offered every year

282 STUDIES IN NINETEENTH-CENTURY AMERICAN LITERATURE/SEMINAR

The specific content and approach for this course is determined by the instructor. The set of readings may be organized in various ways:

by theme, genre, critical approach, or cultural contexts, for example. Contexts in the past have included canonization, Africanism, the American Dream, and literary history. The readings, however, deal predominantly, but not exclusively, with literature written before 1900. Prerequisite: permission of the instructor. Mr. Elliott/Offered every year

283 VISIONS OF REPRESENTATION: 1860-1920/SEMINAR

This course explores the problematic assumptions of literary representation underlying American realism through selected works of American writers. Conventional interpretations of realist writing are often challenged by issues of race, class, gender, and cultural contexts. The course begins by examining works by Twain, Howells, and James, then counterpoints them with selections from writers such as Crane, Dreiser, Jewett, Cather, Wharton, Mary Austin, Ann Petry, and others. Prerequisite: permission of instructor. Mr. Elliott/ Offered every year

284 AMERICAN SPACES I/ DISCUSSION

This course concentrates on the effects of the picturesque aesthetic on the representation of nineteenth-century spaces (landscapes, domestic spaces, and mindscapes) and upon notions of pictorial form in literature, painting, architecture and landscape architecture. In the literature, we analyze the impact of the aesthetic, both story and discourse, in travel literature, in quest narratives, in literature by women, and in black folk literature. Prerequisite: permission of instructor. Mr. Conron/ Offered every other year

285 AMERICAN SPACES II/ DISCUSSION

When American Spaces is taught as a year-long course, the fall semester (284) is devoted primarily to painting and architecture; and the spring semester (285) to the spatial analysis of fiction and poetry. Mr. Conron/Offered every other year

286 AMERICAN MODERNISMS/ DISCUSSION

This course is designed as an interdisciplinary approach to some American versions of modernism in the fine arts, c. 1910-c. 1960. Some ideas about modernity (the modern) as it manifests itself in space, consciousness, gender and race in the United States will be addressed at the beginning of the course; and we will do close analyses of painting, architecture, poetry and prose narrative in light of these ideas. Special attention will also be given to the question of how well modernism serves such constituencies as African-American and women writers. The course is designed for upper-level students, preferably with some experience of interdisciplinary study, including English 180-181 (Major American Writers) or courses in American history, cultural geography, painting or screen studies. Prerequisite: permission of instructor. Mr. Conron/Offered every year

287 MODERNIST SENSES OF PLACE/SEMINAR

This course concentrates on prose narrative and film in the late modernist (after World War II) and postmodernist periods. In keeping with the multicultural character of modernism and postmodernism in the United States, the course includes African-American and Asian-American novels. And it approaches novels and films in terms of the "sense of place," an idea being re-explored by geographers, historians and sociologists as well as scholars of literature and the visual arts. In literature as well as film, this course assumes place is definable in terms of imagery and mise-en-scene: an art of gathering the images into a verbal sketch or scene by framing them (as a close-up or panorama, for example), investing them with an appropriate lighting or atmosphere and positioning the spectator—in ways that affect the meaning of the scene. In modernist and postmodernist art, however, place is also definable in social terms, as a social environment or way of life whose values are evident in the behavior of characters (including dialogue) as well as in built spaces such as cities, houses, rooms. This is what makes the senses of place in modernist art convergent on those in the natural sciences (evolution, ecology) and the social sciences. English 287 is a repertoire of four courses to be rotated at two-year intervals. These include: a) Art of the City: Modernist and Post Modernist New York; b) Regions and Regionalisms: New England and the South; c) Old West and New West; and d) Art of the City: Los Angeles. The course is designed as an upper level seminar for majors and non-majors. English 286 is advised but not required. Prerequisite: permission of the instructor. Mr. Conron/Offered every year

288 ART OF THE CITY: PARIS AND NEW YORK/DISCUSSION

A comparative structural and cultural analysis of two urban designs, Haussmann's Paris and Olmsted's New York; of the visual representation of the two cities by French Impressionists and the American School of Ashcan painters; and of the literary interpretation of the cities by two urban poets, Charles Baudelaire and Walt Whitman. The cities are considered as theaters in which cultural meanings are produced through 1) spatial composition (the city as an assemblage of constructed sets, including boulevards and other promenades, monuments, and department stores) and 2) performances in the set (the city as dramatized narrative). Among the questions to be explored is the matter of cultural kinships and differences between France and the United States. Prerequisite: permission of either instructor. Mr. Conron and Mr. Spingler/ Offered every other year

293 STUDIES IN LANDSCAPE/SEMINAR

This seminar concentrates on various aspects of twentieth-century American space in literature, painting, photography, and film. Texts for the course are chosen, and taught, by the students. Prerequisite: English 285, American Spaces. Mr. Conron/Offered every other year

294 HISTORY OF THE ENGLISH LANGUAGE/LECTURE, DISCUSSION

Focusing on the English language from a historical perspective, this course examines the changes in English during the Anglo-Saxon, medieval, and early modern periods. In addition to learning phonological and grammatical characteristics of the language during each period, the student examines language as a mirror of culture. Ms. Gertz/Offered periodically

295 GENDER IN LANGUAGE USE/SEMINAR

The course focuses on ways in which biological sex is culturally elaborated into gender patterns in language use. Consideration is given to a range of conversational and rhetorical factors that reveal gender identity. Discussion of race, ethnicity, and social position will be included, as well as the impact of gendered discourse for situations such as the classroom, the courtroom, the boardroom, and the medical examination room. Ms. Johnson/Offered every year

296 WOMEN MIRRORED IN EAST AND WEST/SEMINAR

This course probes how women are represented in primary texts (in translation) from early modern China (seventeenth and eighteenth centuries) and from mainly late medieval western Europe (twelfth through fourteenth centuries). In addition to these sources, some secondary texts and illustrations will be examined. We will approach these early representations of women theoretically, literarily, and historiographically. Our purpose will be to explore how representations work with stereotypes and to discuss whether these representations have relevance for us today. Prerequisite: An Asian course or course in Western literature. Ms. Gertz and Mr. Ropp/ Offered periodically

340 INTRODUCTION TO GRADUATE STUDY IN ENGLISH/SEMINAR

This course examines certain fundamental aspects of literary theory and considers the nature of and relationships among the three principal areas in the discipline—bibliography and textual analysis, literary history, and literary criticism. M.A. candidates not specifically exempted are required to take this course. Mr. Sultan/Offered every fall semester

390 DEPARTMENTAL COLLOQUIUM

The purpose of Departmental Colloquium is to provide graduate students with guidance, expertise, and resolution regarding the master's thesis. The chief requirement is an oral presentation by students from prepared outlines or working hypotheses of their thesis topics. This presentation is ordinarily given during the student's final semester of coursework. While the exact format of the colloquium varies according to the professor conducting it, the colloquium can include scheduled guest lectures by faculty of the English Department, as well as by faculty from other departments or universities. Effective fall 1994: participation and registration are required, but no course credit is awarded and not included as one of the eight courses needed to fulfill M.A. course requirements. Staff/Offered every semester

397 MASTER'S THESIS

Prerequisite: permission of thesis advisor. Staff

Environmental Science and Policy

■ PROGRAM FACULTY

Halina Brown, Ph.D.: chair, chemistry, toxicology, risk analysis and management, public health policy

Leslie S. Blatt, Ph.D.: physics, nuclear reactions, energy considerations

Patrick Derr, Ph.D.: philosophy, hazards management policy, public health policy

Jacque L. Emel, Ph.D.: water resources, environmental politics, hydrology

Robert L. Goble, Ph.D.: physics, energy studies, atmospheric transport, risk analysis and management

Frederick T. Greenaway, Ph.D.: environmental and bioinorganic chemistry

Dale Hattis, Ph.D.: quantitative risk assessment, pharmacokinetic modeling, carcinogenesis, biomarkers, inter-individual variability, Monte Carlo simulation

Christoph Hohenemser, Ph.D.: professor emeritus, physics, technology assessment, risk analysis, hazard management

Stuart Licht, Ph.D.: solar energy, analytical chemistry, theoretical chemistry

Todd P. Livdahl, Ph.D.: ecology, population biology

Samuel Ratick, Ph.D.: environmental modeling, transportation logistics and planning, locational choice, impact analysis

Harry Schwarz, B.C.E., P.E.: professor emeritus, water resources engineering, water planning and policy, hydrology, environmental planning

PROGRAM

Environmental Science and Policy is an interdisciplinary program that emphasizes policy questions involving the environment and the use and misuse of science and technology. The goal of the program is to enable individuals to deal with technical issues in a social and political context and to do so with an acute awareness of the short- and long-range limitations of the natural environment to respond to human interventions. The Environmental Science and Policy program offers an undergraduate major, and a master of arts degree in environmental affairs or in technology assessment and risk analysis. Participating faculty are drawn from a number of departments and disciplines and have research interests in a wide range of societal problems including environmental science and management, energy and technology policy, environmental psychology and sociology, and assessment and control of technological hazards. Faculty interests, which are focused on both the developed and developing world, offer both graduate and undergraduate students the chance to participate in research. Office and telephone numbers are posted outside the Environmental Science and Policy program office in the Sackler Sciences Center, Bio/Physics 356. The program assistant, Marcia V. Szugda, will be happy to make an appointment for you with a faculty member. The program office number is (508) 793-7655.

When it began in 1984-'85, the program combined and enhanced long-established programs in environmental affairs and science, technology, and society. Graduates of these programs have taken positions in private industry, consulting companies, environmental foundations, and government, doing work that involves policy analysis and formulation, planning, risk analysis, and environmental impact assessment. Students also have gone on to other graduate fields or have pursued careers in professions such as medicine or law.

UNDERGRADUATE MAJOR

The degree requirements for an undergraduate Environmental Science and Policy major are designed to ensure that students acquire a firm foundation in natural science with considerable exposure to social science/public policy perspectives. Achieving literacy in natural science is especially important for two reasons: (1) many significant problems are accessible only with a thorough grounding in natural science and (2) there is a significant need for managers of science, technology, and environment whose technical background is more than perfunctory.

Accordingly, the requirements for the undergraduate Environmental Science and Policy major emphasize natural science and mathematics.

■ REQUIREMENTS FOR THE MAJOR

The degree requirements for the major include ten semesters of natural science and/or mathematics, two semesters of basic social science, five semesters of interdisciplinary Environmental Science and Policy courses, and a capstone seminar or project.

In addition, majors must fulfill the requirements of Clark's program in Liberal Studies, which includes one verbal expression and one formal analysis course, and a selection of 'perspective' courses. In practice, the scientific and comparative perspective courses and the formal analysis requirement will be completed while meeting the major requirements. The introductory course, ENV 101, fulfills the verbal expression requirement. This means that most students will need to select only three or four additional 'perspectives' courses to meet the requirements of the Program of Liberal Studies.

The Natural Science and/or Mathematics Requirement

Students can choose to focus in one of the following six disciplines to fulfill their natural science/mathematics requirement: biology, chemistry, physics, ecology, computer science, and mathematics. Students choosing either biology, chemistry or physics are required to take six courses in the discipline of their choice, two courses in another discipline of natural sciences, and two courses in mathematics (calculus and statistics). Students choosing mathematics or computer science are required to take six courses in the discipline of their choice and four courses in natural sciences (preferably in two different fields). All of the above five alternatives are classified as Option 1.

Option 2 consists of a focus on ecology. This is a cross-disciplinary course of study intended for students interested in both biological and earth sciences. The science part of the ecology concentration draws primarily on courses offered by the biology and geography departments. Students are also strongly encouraged to take two semesters of chemistry as their second science requirement.

The choice of an appropriate focus depends entirely on a student's inclination and program theme. The study of biology or chemistry, for example, is essential to the student concerned about pollution problems and environmental systems, whereas the study of mathematics or physics is an appropriate background for the fields of risk analysis, energy policy and technology assessment. The ecology concentration is designed for those who would like in the future to work in the areas of resource management, ecological balance, and biodiversity.

The Statistics Requirement

The following courses satisfy the statistics requirement:

Geography 110 Computer and Quantitative Methods in Geography
Biology 280 Biostatistics and Computer Applications
Psychology 105 Quantitative Methods
Government 107 Research Methods
Economics 160 Introduction to Statistical Analysis

The Social Science Requirement

Outside Environmental Science and Policy courses themselves, which contain considerable applied social science, only two courses in basic social science are required. It is thus particularly important that these courses be carefully selected to provide a suitable basis for future development in this area. Social science courses are frequently drawn from such areas as economics, government and social geography. Majors are encouraged to take more than the minimum number of social sciences, since an ideal social science component would consist of four or five courses, with at least three in a single discipline.

Required Environmental Science and Policy Courses

Although there is some overlap in material, Environmental Science and Policy courses may be divided into four types, as follows:

(1) Introductory courses. Designed to familiarize students with the field, as exemplified by ENV 101, these courses generally take a case studies approach. All prospective majors should take at least one semester of introductory Environmental Science and Policy.

(2) Theory and methods courses. These serve to develop the conceptual tools that the student will require to analyze complex problems at the interface of science and human institutions. Majors are required to take at least two of these courses, one of which is ENV 175.

(3) Problem-oriented courses. These apply to methods learned in other courses to a variety of problems requiring a multidisciplinary evaluative approach. Examples are energy policy, health and hazard studies, and multi-objective evaluation of environmental and resource problems. At least two problem-oriented courses are required of majors.

(4) Capstone seminar and research. Designed as a senior year experience, this centers on a seminar required of all majors. Individual students may contribute to the Capstone seminar by integrating it with internships (experience outside the university), research participation in one of the Environmental Science and Policy research groups, or individual research projects designed by the student. The Capstone experience may include the presentation of an honors thesis and a poster or presentation in the Clark University Academic Spree Day event which is held each Spring.

The eighteen semester courses required of majors may be broken down as follows:

A. ENV courses

- one introductory course
- two theory and methods courses, including ENV 175
- two problem oriented courses

B. Basic literacy in natural science and/or mathematics
Option 1 - focus on either biology, chemistry, physics, mathematics or computer science

- six semesters in one natural science,
- mathematics or computer science
- two courses in a second natural science
- two semesters of mathematics, including calculus and statistics; or if six semesters of mathematics and/or computer science are chosen, two semesters of another natural science

Option 2 - focus on ecology

- eight semesters in ecological sciences
- two semesters of math, including calculus and statistics

C. Basic literacy in social science (economics, social geography, government, management)

D. Capstone seminar or project

In practice, there is a great deal of flexibility in the choice of courses. Students should take *Introductory Case Studies* (ENV 101) and the introductory science courses fairly early. Premedical or predental ENV majors must fulfill the premed requirements as well. Double majors in the natural sciences are relatively easy to complete, since students will have already fulfilled at least six of the requirements in the Environmental Science and Policy program. In general, however, if you wish to double major you should sit down at an early stage with the undergraduate advisor to plan your course of studies.

It is important that the choices made lead toward an integrated goal. The assistance by the student's advisor is very important to help in course selection. Students are encouraged to discuss the focus of their studies very early with their advisors so that students' interests and rational progression are simultaneously served.

■ DOUBLE MAJORS

Because of the emphasis placed on developing a solid scientific and/or mathematics background, the program actively encourages double majoring in science or mathematics. In doing so, the natural science and/or mathematics requirement of the program is automatically fulfilled. This leaves a relatively small number of courses, mostly in the social sciences and Environmental Science and Policy, to be taken over and above departmental requirements. Several of these can be used to fulfill the university requirements for the Program of Liberal Studies as 'perspective' courses.

Double majoring with a social science department is considerably more difficult because of the larger number of courses that must be taken to fulfill requirements with a lesser degree of overlap. Still, some students have put together successful joint programs between Environmental Science and Policy and departments such as Economics and Geography, the latter of which has separate requirements for dual or inter-disciplinary majors.

The major disadvantage of a double major is that it reduces the number of elective courses unrelated to the major, although for some students this may be outweighed by the advantage of having depth in both the natural and social sciences. In any case, Clark's Program of Liberal Studies will ensure that all students have a broad liberal arts education.

Those considering a double major are urged to consult with the undergraduate program advisor and faculty in other relevant departments as early as possible. This will ensure the fulfillment of the requirements of both majors without a delay in graduation.

■ THE FIVE-YEAR B.A./M.A. PROGRAM

The five-year B.A./M.A. program is offered to provide more intensive study of Environmental Science and Policy in combination with a liberal arts B.A. degree. Majors in any undergraduate field are acceptable for the M.A. degree although a preference is given to the ENV majors, who can be admitted into the five-year program without any additional requirements. Majors in other disciplines must supplement their courses with a number of preparatory courses in Environmental Science and Policy. In many cases, a number of these courses will also qualify for your undergraduate major and will therefore easily fit into a normal undergraduate program. The preparatory courses that are required before admission into the five-year program differ according to a student's undergraduate major.

■ PREPROFESSIONAL PROGRAMS

Environmental Science and Policy may be an attractive major for students planning to continue in professional schools. The basic reason for this is that many of the requirements are the same.

Premedical and predental program

Students in these programs must fulfill the following requirements:

(1) a year of introductory biology

(2) a year of introductory chemistry

(3) a year of organic chemistry

(4) a year of physics, including laboratory

(5) a year of English

(6) a year of calculus

(7) a year of psychology

Most of these required courses can be used to meet the Environmental Science and Policy major requirements. More information is available in a special premedical program booklet, available from the Office of Career Services.

Prelaw Program

Students in this program have no fixed requirements, but it is generally important to have a number of courses in English and government to develop communication skills. More information is available from members of the Prelaw Advisory Board and the Prelaw Handbook, available at the Office of Career Services.

■ RESEARCH PARTICIPATION, HONORS, AND INTERNSHIPS

Research participation provides a unique opportunity for students to interact with faculty members at a level beyond that of the classroom setting. Most research participation projects require the equivalent of one or two semester courses of work, and often involve the student in a research group consisting of one or more faculty and graduate students. Student-initiated projects or those done under the auspices of an outside group such as the Public Interest Research Group of Massachusetts (MASSPIRG) are also possible.

As a means of encouraging student projects, the program tries to keep its majors informed about research activities of the faculty and others on campus by means of public seminars and lectures. A complete listing of the seminar schedule is available each semester. If you are interested in attending these seminars, please stop by and ask the program assistant for a copy of the schedule.

Honors Honors are awarded upon presentation and oral defense of an undergraduate thesis and poster which is presented at the Clark Academic Spree Day. Students who wish to be considered for honors must have attained at least a 3.0 grade point average in Environmental Science and Policy required courses by their junior year and are encouraged to begin work the summer following the junior year on a project that can be extended into a thesis during the senior year. To embark on an honors project, it is essential to approach an appropriate faculty member and to receive his/her agreement to serve as mentor/advisor for the project. There are three classifications of honors: honors, high honors, highest honors.

Internships. Majors in Environmental Science and Policy are encouraged to strengthen their educational experience by working outside the university in paid or unpaid positions related to their studies. An internship is particularly valuable after the junior year, when a student has gained some intellectual maturity and is in a position to attempt interdisciplinary problem-solving. Another benefit of a junior year internship is that the background gained on a particular problem can be of value in identifying a thesis topic to be pursued in the senior year. The resulting combination of work experience and research productivity in the same field is an important asset for the student when entering the job market. If students wish to receive credit for an internship it is essential that they provide a detailed written analysis of their work in the context of the capstone seminar.

Internships are usually obtained on a case-by-case basis with the advice and assistance of the Environmental Science and Policy faculty or Clark's Internship Office. Students who are interested in internships should discuss the matter with the undergraduate advisor, or their potential honors thesis mentor. The Environmental Science and Policy program assistant also keeps a listing/binder of internships which are available. In recent years interns have worked for the following groups:

Central Massachusetts Regional Planning Commission
Worcester Office of Planning; Regional Environmental Council
Massachusetts Department of Environmental Protection
New England River Basins Commission
New England Electric
Massachusetts Office of Coastal Zone Management
Water Purification Associates, Cambridge
Massachusetts Port Authority, Office of Noise Control
Scientists Institute for Public Information, New York
Blackstone River Watershed Association
Clark Cogeneration Project
Resources for the Future

■ GRADUATE STUDIES

MASTER'S DEGREE

The master's degree in Environmental Science and Policy is not primarily an extension of liberal arts at the undergraduate level. Rather, it is an effort to train individuals who can go directly from Clark into problem-solving jobs in the areas of environmental policy or technology assessment and risk management. In this sense, an Environmental Science and Policy graduate degree is a preparation for a profession.

The M.A. in technology assessment and risk analysis trains students in evaluating the benefits and hazards of technology and may lead to further graduate work or entry-level positions in the fields of environmental and occupational health and safety as well as positions in environmental management.

Ten course units are normally required for a master's degree. These are earned through a combination of classroom courses, research apprenticeships, and theses preparation. Because of limited faculty resources for formal course offerings, graduate students should accomplish a significant portion of their learning through research apprenticeships. Emphasis on research is also consistent with the goal of the program: to prepare students for problem-solving jobs. The program has the following formal requirements:

(1) *Core Curriculum*. Students must take four semesters of the Environmental Science and Policy graduate core curriculum, including:
ENV 226: Seminar: Environmental Hazards—Theory, Models, and Applications
ENV 250: Technology Assessment
ENV 251: Limits of the Earth
ENV 265: Quantitative Methods in Risk Analysis

(2) *Research Participation*. Students must take at least one semester of research, which is accomplished through work on M.A. thesis. Most students take two or three semesters of research.

(3) *Electives*. These are chosen from other courses offered by the Environmental Science and Policy Program and related departments and programs.

(4) *Comprehensive Examination*. Students must undertake at the M.A. level a written qualifying examination on the core curriculum. Normally given in May, after the completion of the spring semester, this examination is intended to test the breadth of the student's knowledge in the subject matter of the core curriculum, and it should be completed before beginning thesis work.

Students from other institutions or from Clark are admitted to the master's program upon application to the program office. Clark students who have been previously admitted to the integrated B.A./M.A. program, and who complete the requirements for this program, may count any two 200-level courses, internships, or research projects towards the ten-course requirements of the M.A. degree. These courses must have approval of the graduate advisor and must be completed with a B- or better.

■ INTRODUCTORY COURSES

101 INTRODUCTORY CASE STUDIES/LECTURE, DISCUSSION

Introduces the student to technology assessment and environmental policy through illustrative cases covering issues such as population and food, land and water resources, energy systems, pollution control, technology assessment, waste management, and arms control. Both writing and quantitative methods are emphasized so that students will become aware of the multidisciplinary approach needed in analysis of the cases. The course can be taken for verbal expression credit. Staff/ Offered every semester

102 INTRODUCTION TO ENVIRONMENTAL MANAGEMENT/ LECTURE, DISCUSSION

Provides an overview of the physical and humanistic components of major global environmental problems—world food supplies, tropical deforestation, acid rain, ozone layer destruction, and land degradation. Students are introduced to the major biogeochemical cycles, interactions of the atmosphere and hydrosphere, and measurable trends in global ecology. Poverty, world health, population trends, and the roles of science and technology are examined as factors in, and products of, the global environment. Ms. Emel/Offered every year

103 ENVIRONMENT 1995/ LECTURE, DISCUSSION

An assessment of major environmental issues, particularly those global in nature, confronting human society in the current year. Attention to problems requiring human intervention, rapid population growth, consumption values, global poverty, ozone depletion, and hazardous waste disposal. The interplay between environmental change and public policy is stressed. Intended for those desiring introductory or general knowledge. Staff/ Offered every year

■ THEORY AND METHODS

109 SCIENCE AND SOCIETY WRITING SEMINAR/SEMINAR

This writing seminar is intended for students who are interested in how people interact with complex technologies or with complex natural systems and who wish to develop skills in using non-technical language to describe and analyze technical subjects. Each year the seminar concentrates on a particular topic of current interest. Students write papers that—after integration and editing in the seminar—may be published as part of the Environmental Science and Policy Review. Past topics have included the Challenger accident and testing for AIDS. Mr. Goble/ Offered periodically

115 HYDROLOGY/LECTURE

Provides an overview of the hydrologic cycle and its major components including precipitation, evapotranspiration, soil moisture, surface water runoff, and groundwater flow. The course focuses upon the role of water as a unifying concept in environmental science. Examines human modification of natural hydrologic regimes. Prerequisite: Geography 014. Ms. Emel/Offered every other year

124 ECONOMY AND ENVIRONMENT/LECTURE, DISCUSSION

This course addresses the historic intersection of industrialization, urbanization, and ecology. We examine cases of economic, environmental, and political conflict over the past 300 years in order to gain historic depth on contemporary issues. London air pollution, New York City water supplies, mechanized fishing in the Pacific, European coal mining, and American forestry product industries are among the cases we consider. The course objective is to help students envision the relationships between the environment and work, technology, consumption, finance, and other economic activities. Legal and political histories pertinent to these relations are also addressed. Ms. Emel/Offered every other year

142 ENVIRONMENTAL CHEMISTRY/LECTURE, LABORATORY

Focuses on the chemistry related to environmental problems, particularly aquatic chemistry and aquatic pollution. Equilibrium theory is developed as a model for aquatic chemistry, and chemical analyses of local aquatic systems are conducted in the laboratory according to Environmental Protection Agency procedures. Prerequisite: Chemistry 102. Three lectures and one four-hour laboratory per week. Mr. Licht/Offered every year

157 TECHNOLOGY AND SOCIAL CHANGE/LECTURE, DISCUSSION

This course focuses on the interaction between technology and society. Among the topics considered are: the nature of technology and its relationship to society; historical and contemporary case studies of the impact of technology; the nature of technological failures; and forecasts of how technology may change society by the year 2000. Mr. Mitchell/Offered every year

175 SCIENCE, DECISION MAKING, AND UNCERTAINTY/ LECTURE, WORKSHOP

An examination of decision making under conditions of scientific uncertainty. The goal of the course is to describe: (1) strengths and limitations of scientific analysis in the assessment of environmental and technological issues, and (2) methods designed to aid decision making under uncertainty. Initial emphasis is on the structure of scientific knowledge, ways of knowing, and types of scientific uncertainty, with examples drawn from particle physics, chemistry, engineering, epidemiology, and opinion research. Case studies of environmental and technological risk management take these issues into the "real world." Weekly workshop includes practical exercises in statistical treatment of data, fitting data to a form, calculation of uncertainty, interpretation of epidemiological data, and computer simulations of dose-response models and multi-compartmental kinetic models. This course can be taken for a scientific perspective credit. Ms. Brown/Offered every year

200 LAND DEGRADATION/SEMINAR

Resource use has often resulted in the degradation of aquatic and terrestrial productivity. The roles of agricultural deforestation and industrialization on the land degradation problem are examined both in a contemporary and a historical framework. Mr. Lewis/ Offered periodically

201 OCEANIC ISLANDS: GEOLOGY AND ECOLOGY/ LECTURE, DISCUSSION

This field-oriented course on the biology and geology of Bermuda consists of three parts: (1) weekly meetings during the first half of the spring semester involving lectures, readings, and discussions; (2) a one-week field and research experience in Bermuda during spring vacation; and (3) presentation of research results during the second half of the spring semester. Mr. Herwirz, Mr. Livdahl/Offered every year

205 ENVIRONMENTAL PROTECTION LAW/ LECTURE, DISCUSSION

Surveys federal, state and local legislation governing such areas as clean air and water, transportation, disposal and cleanup of hazardous waste, protection of endangered species, protection of endangered species, protection of wetlands and aquifers, and toxins in the home and work place. The course covers enforcement issues, regulatory agencies, common law origins and international environmental initiatives. Ms. Livdahl/Offered every year

210 ENVIRONMENT AND SOCIETY/LECTURE, DISCUSSION

A central theme of this course is to analyze the relationship between human societies, especially those that are industrialized, and the natural environment. Among the topics to be considered are: the impact of industrialization on nature, the population-resource debate, the rise of modern environmental concern and political action, and pesticides and energy policy issues. Mr. Mitchell/Offered every year

216 ECOLOGY/LECTURE

Provides an overview of ecology as a scientific discipline. The primary emphasis is on efforts to explain and predict the distribution and abundance of organisms, how ecological communities are composed, and why they vary in time and space. Prerequisites: one or more courses from the organismal biology group and one college-level math course. Mr. Livdahl/Offered every year

218 SEMINAR IN PHYSICAL ENVIRONMENT AND DEVELOPMENT/SEMINAR

The world is changing more rapidly than at any time in history. This course reviews the patterns of change in the Third World, examines the role of environment and resource management in development, and allows students to develop their own in-depth case studies. Permission of instructor required. Mr. Lewis/Offered every other year

226 SEMINAR: ENVIRONMENTAL HAZARDS—THEORY, MODELS, AND APPLICATIONS/LECTURE, DISCUSSION

An introduction for advanced students to the theory and methods of risk assessment and the management of environmental hazards. Case study material is drawn from current research including natural hazards, hazards of consumer products, energy production, toxic chemicals, and transportation. ENV 226 is part of the core curriculum for ENV graduate students. Staff/Offered every year

234 LAND AND DEVELOPMENT IN LATIN AMERICA/LECTURE, DISCUSSION

The appropriation and inclusion of Latin American lands in the larger world economy has been an object of policy and debate since the Spanish conquest. Contemporary elements of this process are reviewed, beginning with efforts at agrarian reform and their social, political, and economic significance. The incorporation of peripheral lands of the American tropics are investigated for impacts on native populations, and finally on the global environment. Special emphasis is given to the policy context of land and development, as well as efforts to change patterns of land appropriation and inclusion for social and environmental ends. Staff/Offered every year

247 COMPUTER AND QUANTITATIVE METHODS IN GEOGRAPHY/LECTURE, LABORATORY

Focuses on the following topics: multiple correlation and regression (including the analysis of residuals); analysis of covariance, dummy variables, and other applications of the linear model; and multivariate extensions of analysis of variance. In the labs associated with this course, students work with the BMDP and SPSS sofware packages and are introduced to computer programming. Prerequisite: Geography 110. Mr. Ratick/Offered every year

249 SPATIAL ANALYSIS/LECTURE

The fundamental purpose of spatial analysis is to describe, evaluate, and predict the patterns of physical and social relations between and among places. This course provides a systematic development of the theories and methods used for spatial analysis with specific emphasis on those most applicable to decision making. Topical areas for potential application of these techniques include environmental assessment, transportation analysis, and resource management. The ways in which these methods can be used with geographical information systems are developed. Mr. Ratick/Offered every other year

250 TECHNOLOGY ASSESSMENT/SEMINAR

This course focuses on methods and techniques currently used to assess and evaluate the consequences of technologies. Different approaches to technology assessment are discussed and various case studies are presented. This course is part of the core curriculum for ENV graduate students. Mr. Ratick/Offered every year

251 LIMITS OF THE EARTH/SEMINAR

This course is a systemic review of the data and the quantitative methods that can be used to project changes in populations, resource bases, and environmental cycles. Student papers and presentations for the development of each are required. This course is part of the core curriculum for ENV graduate students. Mr. Goble /Offered every year

252 LOCATING HAZARDOUS FACILITIES/SEMINAR

This seminar provides a problem-oriented forum to study siting of hazardous facilities. The course includes a review of the theoretical foundations that relate to facility location decisions, including discussions of efficiency and equity issues, an evaluation of analytical methods that have or can be applied to this policy decision problem, and a critical analysis of specific facility location case studies. The course consists of lectures, hands-on problem analysis, and focused class discussions. Mr. Ratick/Offered periodically

265 QUANTITATIVE METHODS IN RISK ANALYSIS/SEMINAR

For advanced students, an introduction to quantitative methods in risk analysis, including fault-free analysis, dose-response models, risk benefit analysis, cost-effectiveness analysis, and quantitative methods for risk comparisons. Applications to auto accidents, nuclear power, cigarette smoking, and radiation health effects. This course is part of the core curriculum for ENV graduate students. Ms. Brown /Offered every year

271 GROUNDWATER HYDROLOGY AND MANAGEMENT/LECTURE, DISCUSSION

An introduction to both the geological and hydrological factors controlling the occurrence and development of groundwater and the methods and impacts of groundwater management. Ms. Emel/Offered every other year.

280 URBAN ECOLOGY: CITIES AS ECOSYSTEMS/LECTURE, DISCUSSION

Students explore the ecology and physical geography of cities as systems built, inhabited, and "managed" by people. This special class of ecosystem is often neglected except in very specialized studies of pollution, yet it is home to many of the world's people and to a surprising number of plant and animal species as well. Readings, lectures, discussion, and written work combine landscape and systems ecology with physical and urban geography to broaden our understanding of city environments, both present and possible. Ms. Rocheleau/Offered periodically

289 PROBLEMS IN POLITICAL ECONOMY OF DEVELOPMENT SEMINAR/SEMINAR

This course gives background material on development in the Third World. Class members then outline a policy framework for the development of an impoverished Third World region, usually Southern Africa. Mr. Peet/Offered every year

297 REMOTE SENSING/LECTURE, LABORATORY

A more detailed consideration of the use of remote sensing for environmental analysis, particularly land use. Includes a class remote sensing project and field work. Mr. Steward, Mr. Eastman/Offered periodically

304 SEMINAR ON WATERSHED ECOLOGY/SEMINAR

An advanced seminar that examines the current scientific literature on the functional ecology and biogeochemistry of contrasting terrestrial ecosystems. Topics covered include the inputs, outputs, and internal transfers of water and nutrients in temperate hardwood forests, in barrens, bald cypress swamps, tropical rainforests, montane cloud forests, eucalypt woodlands, and arid environments. The processes of rock weathering, leaching from above ground vegetative surfaces, nutrient uptake by plants, and stream discharge of nutrients are emphasized. The Hubbard Brook ecosystem study is considered in detail with a field trip to the Hubbard Brook experimental watershed in the White Mountains. Mr. Herwitz/Offered every other year

342 SEMINAR IN HUMAN DIMENSIONS OF GLOBAL CHANGE: DRIVING FORCES/SEMINAR

Human-induced global environmental change has reached unprecedented magnitudes and now includes direct impacts on the biogeochemical flows that sustain the biosphere. Social science understanding of the human dimensions of this scale and kind of change is poorly developed, and the research agenda to address it is still emerging. This seminar explores the role of humankind as the driving force or source of global change. Emphasis is placed on the development of a framework that helps to identify these forces and to understand their role by situation (local/ regional variability) and by spatial scale. Mr. Turner/Offered periodically

343 SEMINAR IN HUMAN DIMENSIONS OF GLOBAL CHANGE: SOCIETAL RESPONSES/SEMINAR

This course explores societal responses to and management of global environmental change. Major topics to be addressed are: societal response pools, adaptation vs. adjustment, surprise, vulnerability analysis, policy analysis, social learning, and regime theory. Staff/ Offered every other year

345 RESEARCH SEMINAR IN ENVIRONMENTAL PERCEPTION/SEMINAR

Examines theories and major research on the human perception of the natural and social environment and the relationship between perception and behavior. Attention is given to the relevant methodologies. Part of the semester is devoted to students' research interests. Mr. Mitchell/Offered periodically

350 NATURE, SOCIETY, AND TECHNOLOGY/SEMINAR

Examines theories and major research findings on the relationship between human societies and the natural environment. Mr. Mitchell/Offered every other year

351 RESOURCE GEOGRAPHY: THEORY AND METHOD/SEMINAR

Examination of major theories and methods of resource estimation, allocation, and management, providing coverage of the scholarly literature of the field. Ms. Emel /Offered every other year

■ COURSES ON ENERGY PROBLEMS

130 ENERGY SYSTEMS, ECONOMICS AND POLICIES/LECTURE

An introduction to the subject of energy for ENV majors and others interested in the utilization of fossil fuels, solar and wind power, geothermal energy, and nuclear fission and fusion. Emphasis is placed on basic concepts, thermodynamic principles, efficiency of use, economic principles of the energy market, and energy policies. The course provides the necessary background for those planning more detailed study of energy technology or policy. Mr. Goble/Offered occasionally

■ COURSES ON HEALTH AND HAZARD PROBLEMS

131 MEDICAL ETHICS/ LECTURE, DISCUSSION

An investigation of contemporary issues in medical ethics: informed consent, definitions of death, treatment termination and euthanasia, abortion, confidentiality and truth-telling, genetic testing and counseling, research on human subjects, allocation of scarce medical resources, new reproductive technologies, the HIV epidemic, and national health policy. Mr. Derr/offered every semester

234 HEALTH AND DISEASE IN THE AMERICAN HABITAT/ LECTURE, DISCUSSION

A synoptic view of concepts and practices concerning health and disease, based on readings drawn from medical and historical geography, biological science, and the history of American medicine and public health. Emphasis on societal interactions with disease environments during the last hundred years and their intellectual consequences. Not open to first-year students. Mr. Koelsch/Offered every other year

241 ENVIRONMENTAL TOXICOLOGY/LECTURE, DISCUSSION

Focus is on the assessment of hazardous properties of toxic chemicals in the environment and on development of public health policy. The first part covers the principles of absorption, distribution, excretion, and toxic action of chemicals on humans; animals testing; and human epidemiology. The second part covers assessment of public health risks on the basis of animal and human test results, development of standards for air and water contaminants, and uncertainty in regulating hazardous chemicals. Prerequisite: one semester of organic chemistry or permission of the instructor. Ms. Brown /Offered every other year

246 CANCER: SCIENCE AND SOCIETY/SEMINAR

The focus is on one of the most dreaded diseases in modern society: cancer. In the first part, the course considers the geographic distribution of cancer in this country and the world, factors contributing to its formation, and the biologic mechanisms underlying cancer. The course then concentrates on screening techniques for detecting cancer-causing agents and on methods for assessing and regulating cancer risks to humans. The third part focuses on case studies of selected human carcinogens as well as social and political controversies surrounding this disease. Ms. Brown/ Offered every other year

281 ENVIRONMENTAL HEALTH SEMINAR/SEMINAR

This is an advanced seminar that focuses on the interrelationship between science and policy in key developments in the environmental health arena in the U.S. over the past two decades. It is built around several case studies, including food additives, and carcinogenic and noncarcinogenic air, water and soil contaminants, as well as human and ecological health protection. The scientific controversies in these cases are presented vis-à-vis legislative mandates, the need for benefit-cost accounting, and the public perception of risks. Ms. Brown/Offered every year

■ COURSES ON ENVIRONMENT AND RESOURCE PROBLEMS

182 POLITICS, PEOPLE AND POLLUTION/LECTURE, DISCUSSION

Environmental problems and issues arise from economic development processes in both industrialized and developing countries. What are the facts and what are the myths in a consideration of environment and development? How do we establish policies for dealing with these problems? What are the processes by which governments make decisions addressing complex environmental/development issues here and in distant parts of the world? This course offers students an opportunity to examine the relations between environment and development in the context of developing and industrialized societies. Ms. Thomas-Slayer, Mr. Schwarz/Offered periodically

236 INTERNATIONAL AND COMPARATIVE RESOURCE POLICIES/SEMINAR

Deals with international and comparative law/policy of water resources, fisheries, land, oceans and seas, wildlife, air, and nuclear power. Within the context of each of these topical areas, the course objectives are to define the "resource problem(s)," analyze existing institutions (i.e., property rights, management systems, and allocation regimes) and their responses to the problems, and consider conceptual guidelines for improving institutional arrangements and individual actions. Ms. Emel/Offered every other year

256 PROBLEMS IN WATER RESOURCES PLANNING/ LECTURE, PROBLEMS

Water resources planning techniques; water resources engineering; and economic, social, and environmental topics are reviewed and applied in a realistic planning exercise. Students working in groups prepare, for a selected region or river basin, a preliminary planning document that could be used as a guide for future detailed planning. Emphasis is on the preparation and the written and oral presentation of the planning document in a professional manner that would be acceptable in the real world. Prerequisite: a 200-level course in environmental assessment; physical geography; economics; environmental science and policy; or permission of instructor. Mr. Schwarz/Offered periodically

271 GROUNDWATER HYDROLOGY AND MANAGEMENT/LECTURE, DISCUSSION

An introduction to both the geological and hydrological factors controlling the occurrence and development of groundwater and the methods and impacts of groundwater management. Ms. Emel/Offered every other year

275 CITIZEN PARTICIPATION—THEORY AND APPLICATION/ SEMINAR

Explores gender as a key variable in determining roles, responsibilities, rights, and opportunities in "developing countries." The course considers various methodologies of gender analysis for their relevance to national policies and programs and their usefulness to the design, implementation, monitoring, and evaluation of projects. It focuses on community institutions and organizations and their potential roles in alleviating poverty and fostering sustainable development. Ms. Thomas-Slayter/Offered every year

■ DIRECTED READING AND RESEARCH

290 CAPSTONE RESEARCH/ SEMINAR

A required course for senior Environmental Science and Policy majors, this seminar offers an opportunity to integrate the strands of the major or to prepare a research proposal for a master's thesis. Specific topics for investigation are chosen largely on the basis of student interest from a broad array including global environment threats, energy and other resource issues, arms control and disarmament, and technological risk assessment and management. Unlike a regular course, student presentations constitute a major portion of class meetings, with the instructor as a facilitator of discussion and as a general resource for the group. Students must be seniors or second semester juniors and must have completed a substantial fraction of their major requirements. Mr. Goble or Mr. Hohenemser/ Offered every year

298 RESEARCH AND THESIS

Offered to students who want to conduct research under the guidance of faculty. The product of the research may be an undergraduate thesis acceptable for honors in Environmental Science and Policy, or it may be another product to be defined by the student and faculty tutor. By permission only. Variable credit. Staff/Offered every semester

299 DIRECTED READINGS

Offered to undergraduate students who want to pursue a specific topic on their own, with tutorial assistance by a faculty member. By permission only. Staff/Offered every semester

397 MASTER'S THESIS

Staff/Offered every semester

399 DIRECTED READINGS AND RESEARCH

Offered to graduate students who want to pursue a specific topic on their own under the supervision and guidance of a faculty member. By permission only. Variable credit. Staff/ Offered every semester

Foreign Languages and Literatures

■ DEPARTMENT FACULTY

William Ferguson, Ph.D., chair: Spanish Golden Age literature, twentieth-century Hispanic literature

María Acosta Cruz, Ph.D.: Spanish American literature, Baroque literature, postmodern literature, comparative literature, contemporary literary theory

Michiko Aoki, Ph.D.: Japanese language and culture

Tzilla Barone, B.A.: Hebrew language and literature

Paul F. Burke Jr., Ph.D.: Greek and Latin language and literature, classical mythology, classical art and archaeology

Marcia Butzel, Ph.D.: French and Italian film, cultural studies, French narrative

Carol C. D'Lugo, Ph.D.: Spanish and Spanish American narrative, literary theory

Marvin A. D'Lugo, Ph.D.: Hispanic literature and film, narrative theory

Everett Fox, Ph.D.: Hebrew Bible, Midrash, Jewish ritual and folklore, classical Jewish thought

Kenneth Hughes, Ph.D.: nineteenth- and twentieth-century European literature, comparative literature, literary theory.

Hartmut Kaiser, Ph.D.: German language and literature, German romanticism, the fairy tale, relations between music and literature

Dorothy Kaufmann, Ph.D.: French literature, feminism and women writers, autobiography, French and Francophone cultural studies

Tatyana K. Macaulay, Ph.D.: Russian and Czech languages and literatures, Old Russian literature, nineteenth- and twentieth-century Russian literature, Russian culture

Constance M. Montross, Ph.D.: Spanish-American literature

Walter Schatzberg, Ph.D.: age of Goethe, German expressionism in literature and the arts, German cinema, relations between literature and science

Catherine C. Quick Spingler, M.A.: French language and literature

Michael K. Spingler, Ph.D.: French theater and film, comparative drama, translation

Martine Voiret, Ph.D.: eighteenth-century French literature

■ EMERITI

Raymond E. Barbera, Ph.D.: Romance languages

J. Fannin King, M.A.: Romance languages

J. Richard Reid, Ph.D.: Romance languages

The Foreign Languages and Literatures Department is part of the Alice Coonley Higgins School of Humanities.

■ UNDERGRADUATE PROGRAM

The Major in Foreign Languages and Literatures

Our major programs investigate how peoples and nations express themselves through language, literature and other cultural phenomena. The strong interdisciplinary spirit of the program serves to illuminate the relationship between national literatures and other areas of the humanities and social sciences, such as history, philosophy, fine arts, psychology, sociology, and international relations.

The major in Foreign Languages and Literatures is offered in French, German, and Spanish. It is also possible, at the department's discretion, to major in more than one language (the Combined Foreign Languages major).

There are majors available in Comparative Literature and Ancient Civilization as well. Though based in Foreign Languages and Literatures, these two programs—together with the minor offered by Ancient Civilization—are described elsewhere in the catalog under their own headings.

Major Requirements

1. Eight courses above the intermediate level.

In French, major credit is given for courses above French 106; in German, above German 102; in Spanish, above Spanish 127.

The eight required courses are to include

a. an introductory-level course in literature;

b. a course in culture criticism;

c. for Spanish majors, an advanced grammar and composition course (Spanish 137 or the equivalent);

d. the Advanced Topics course (199);

e. at least two courses taken in a Clark-sponsored or Clark-approved study abroad program. (This requirement may be waived in special circumstances).

At least four of the eight required courses must be taken in residence at the Worcester campus.

2. Five related courses, at least one of which must be in Comparative Literature.

These five related courses are to be selected in consultation with the major advisor. They might be courses in other languages and literatures, or in subjects further afield that serve to enrich the student's understanding of the core material.

When the major program is concentrated in one language, a reading knowledge of a second language is strongly recommended.

Only course grades of C or better may be counted toward the major.

The Minor in Foreign Languages and Literatures

A minor program in Foreign Languages and Literatures is offered in French, German, and Spanish.

To qualify for the minor, a student must complete six courses in the chosen discipline, at a level of difficulty that would count toward a major in that field. Some of the six courses may be replaced by courses outside the field of study but related to it (a course in Latin American history, for example, might be counted as a related course toward a minor in Spanish).

Advanced Topics courses required of majors (French 199, German 199, and Spanish 199) are not required for the minor, but they may be taken for minor credit with permission of the instructor.

Courses taken in study abroad programs may be counted toward the minor, at the department's discretion.

Students must declare their intention of fulfilling a minor by the end of the junior year.

Only course grades of C or better may be counted toward the minor.

The Advisor System

Advisors are department faculty members in the appropriate disciplines who are assigned to students at the time their major or minor is registered with the department.

There should be regular consultation between students and their advisors, whose role is to suggest a coherent and rewarding course of study, discuss and approve related courses, and, in the case of majors, identify areas of special interest that could lead to an honors project in the senior year.

Honors in Foreign Languages and Literatures (Majors Only)

Majors who have done well in their Advanced Topics course (199) are invited to do an honors project in the senior year. A student who wishes to work for honors should 1) determine a suitable topic, in consultation with the major advisor; 2) find a faculty supervisor in the appropriate area of study (it may or may not be the major advisor); and 3) secure the permission of the department chair.

A second reader, someone chosen from the faculty who is well-versed in the field, will participate in the final evaluation of the honors project upon its completion.

Applicants for honors should ordinarily ask the chair's permission before the end of the junior year. (Extensions of this deadline may be granted in special circumstances.)

The honors project supervisor and the student are expected to agree on an appropriate work schedule, but in any case a preliminary draft of the project must be completed by the first Monday in April. The final version is due one week before the last day of classes.

An honors project counts as one unit of credit.

The major in Comparative Literature

Please see Comparative Literature for a description of this program.

The major and minor in Ancient Civilization

Please see Ancient Civilization for a description of these programs.

Study Abroad

Information on study-abroad programs in France, Germany, and Spain is available at Clark's Office of Study Abroad Programs.

Advanced Courses in the French, German, and Spanish majors, listed by area of concentration

■ LANGUAGE COURSES

FRENCH 120
Ways of Writing, Ways of Speaking

FRENCH 135
Translation Workshop

GERMAN 131
Spoken and Written German

GERMAN 134
Workshop in Translation

SPANISH 127
Practice in Oral and Written Spanish

SPANISH 137
Advanced Oral and Written Spanish

SPANISH 141
Translation Workshop

■ STUDIES IN LITERATURE

FRENCH 131
Readings in French Literature I: History, Genres

FRENCH 132
Readings in French Literature II: Themes, Problems

FRENCH 156
History, Writing and Ideology—Twentieth-Century France

FRENCH 171
Visions of Change in Eighteenth-Century Literature

FRENCH 174
Studies in Autobiography

FRENCH 181
Figures of Femininity in French Literature

FRENCH 183
Narratives of Modernity

FRENCH 185
Women's Writing in Twentieth-Century France

FRENCH 187
Love in the French Literary Tradition

GERMAN 140
Modern German Prose

GERMAN 145
The German Novelle

GERMAN 156
The Modern German Short Story

SPANISH 131
Readings in Hispanic Literatures

SPANISH 136
Women in Hispanic Literature

SPANISH 138
Hispanic Literature of Political Commitment

SPANISH 139
Hispanic Caribbean Fiction

SPANISH 142
The Latin American Novel

SPANISH 145
Hispanic American Short Story

SPANISH 160
The Age of Cervantes

SPANISH 180
Latin American Literature in Translation

■ STUDIES IN CULTURE

FRENCH 136
Studies in French Culture

FRENCH 156
History, Writing, and Ideology in Twentieth-Century France

FRENCH 158
The French-Speaking World

FRENCH 180
Art of the City: Poets and Painters of Paris

FRENCH 191
French vs. American Television

GERMAN 112
The Fairy Tales of the Brothers Grimm

GERMAN 168
Music in German Literature and Thought

GERMAN 188
The Culture of the Weimar Republic in Literature, Film,and the Arts

GERMAN 192
Richard Wagner's Music Dramas: Myth and Innovation

SPANISH 133
Hispanic Themes

SPANISH 143
Latin American Essay and Thought

SPANISH 207
Field Work in the Hispanic Community

■ STUDIES IN FILM AND THEATRE

FRENCH 160

French Culture Seen Through Film: Jean Renoir

FRENCH 163
History of French Cinema: Before World War II

FRENCH 165
French Play Production

FRENCH 167
French Cinema: The New Wave

FRENCH 170
The Modern French Theater: Experiments of the Avant-Garde

GERMAN 166
German Drama from Lessing to Brecht

SPANISH 140
Spanish Dramatic Expression: Play Production

SPANISH 146
Introduction to Cinema in Spain

SPANISH 147
Studies in Spanish Cinema

SPANISH 148
Introduction to Cinema in Latin America

SPANISH 149
Studies in Latin American Cinema

■ COURSES

A. Classics

B. French

C. German

D. Hebrew

E. Japanese

F. Russian

G. Spanish

A. CLASSICS

GREEK 101-102 INTRODUCTORY GREEK/LECTURE, DISCUSSION
Refer to course descriptions under Classics Program listings. Mr. Burke/Offered every year

LATIN 101-102 INTRODUCTORY LATIN/LECTURE, DISCUSSION
Refer to course description under Classics Program listings. Staff/Offered every year

B. FRENCH

FRENCH 101-102 ELEMENTARY FRENCH/LECTURE, DISCUSSION
Designed for students with no background in French or up to two years of high school French. Students work on all four language skills (listening, speaking, reading, writing) with the aim of developing an active knowledge of French. Individual work is done in the language laboratory. In the second semester, students participate in a weekly conversation group with a French teaching assistant. No credit is given for French 101 until successful completion of French 102. Staff/Offered every year

FRENCH 103 ELEMENTARY FRENCH: INTENSIVE/LECTURE, DISCUSSION

Designed as an entry-level course for students who have had more than two years of high school French or the equivalent but who are not yet ready for work at the intermediate level. The course emphasizes active communication through speaking and writing. Students participate weekly in small discussion groups with a French teaching assistant and work individually in the language lab. Staff/Offered every year

FRENCH 105 INTERMEDIATE FRENCH I/LECTURE, DISCUSSION

This course offers consolidation of basic skills in French for students who have completed French 102 or the equivalent. The course includes a systematic review and expansion of fundamental grammatical structures. Our aim is to develop skills in oral and written expression. There are weekly conversation groups with a French teaching assistant as well as individual laboratory work. Prerequisite: French 102, 103, or equivalent determined by placement exam. Staff/Offered every semester

FRENCH 106 INTERMEDIATE FRENCH II/LECTURE, DISCUSSION

This course serves as a bridge between the basic skills courses and the advanced courses in language, literature, and culture. Greater emphasis is placed on the reading of literary and cultural texts. Our aim is to develop the ability to articulate ideas and to participate in meaningful discussions in French. Grammar review is based on the specific needs of the group as revealed by class work and compositions. There are weekly conversation groups with a native French speaker. Prerequisite: French 105 or equivalent determined by placement exam. Staff/Offered every semester

FRENCH 120 WAYS OF WRITING, WAYS OF SPEAKING/LECTURE, DISCUSSION

A third-year-level course designed to increase communicative competence and especially to develop skills in writing French. Models taken from literature and the media are used as a basis for creative and critical expression. The aim of the course is to develop awareness of different registers and social levels of French and to strengthen both grammatical control and range of language use. Prerequisite: French 106 or equivalent determined by placement exam. Staff/Offered every year

FRENCH 131 READINGS IN FRENCH LITERATURE I: HISTORY, GENRES/LECTURE, DISCUSSION

An introduction to the analysis and understanding of French literary texts and their visions of the world and of the self. This course focuses on literary structures and conventions that form the basis of different genres as they are expressed in different periods of history. Readings include a wide range of complete texts in prose, theater, and poetry. Prerequisite: French 120 or permission. Staff/Offered every year

FRENCH 132 READINGS IN FRENCH LITERATURE II: THEMES, PROBLEMS/LECTURE, DISCUSSION

A study of representative fictional and dramatic texts in the French literary tradition, organized thematically. Introduces the student to the ways literature reflects a nation's cultural and intellectual experience. Prerequisite: One third-year-level course or permission of the instructor. Staff/Offered every year

FRENCH 135 TRANSLATION WORKSHOP/LECTURE, DISCUSSION

Students work intensively on various texts (advertising, journalism, theater, film scripts, and fiction) exploring theory, techniques, and problems of translation. The emphasis is primarily on translation from French into English and stresses lexical and syntactic aspects of comparative style. Students become acquainted with the variety of texts an American professional translator might expect to work on, including film subtitling. Prerequisite: French 120 or above or permission. Mr. Spingler/ Offered every other year

FRENCH 136 STUDIES IN FRENCH CULTURE/LECTURE, DISCUSSION

A cross-cultural course concentrating on the evolution of traditional French values, myths, and social institutions. We study the conventions and codes that determine and shape culturally based thought and perception. The course pays particular attention to the general question of ideology and representation as instruments of cultural placement and identity. Prerequisite: French 120 or above or permission.

Specific topics include: 1) Louis XIV's Gardens of Versailles and Napoleon III's redesigning of Paris as cultural texts that represent dominant political and social ideologies or 2) issues of cultural identity and cultural difference, with particular attention to Franco-American (dis)connections. Prerequisite: French 120 or above or permission. Mr. Spingler, Ms. Kaufmann/Offered every year

FRENCH 156 HISTORY, WRITING & IDEOLOGY: TWENTIETH-CENTURY FRANCE/LECTURE, DISCUSSION

An interdisciplinary analysis of contemporary France, using literature, social texts, and film. We focus on the Occupation, the French war in Algeria, consumer society and May '68 student uprising, new cultural and artistic ideologies, the new Europe, and issues of immigration. Sometimes offered as French 199. Prerequisite: French 136 or equivalent. Ms. Kaufmann/Offered every other year

FRENCH 158 THE FRENCH-SPEAKING WORLD/LECTURE, DISCUSSION

An interdisciplinary analysis of the problematic role of the French language and the culture it represents in various parts of the world with emphasis on the Antilles, Algeria, and French-speaking Africa. Through literature, social texts, and film we explore such issues as bilingual colonialism; the question of négritude; the Algerian war; conflicts between indigenous and French social codes. Prerequisite: two courses at 131 or above, or permission of instructor. Ms. Kaufmann/ Offered every other year

FRENCH 160 FRENCH CULTURE SEEN THROUGH FILM: JEAN RENOIR/LECTURE, DISCUSSION

A close analysis of the cinematic aesthetic and narrative strategies of the films of Jean Renoir, one of the leading and most influential figures in French cinema. The course will trace the development of his art through a detailed study of a number of his films and filmscripts, and then focus particularly on the way two works, *The Grand Illusion* and *The Rules of the Game*, explore the historical problem of a continuing presence of pre-revolution values and myths within twentieth-century French "republican" culture. Taught in English and French sections. Prerequisite for students receiving French credit: two third-year-level courses or permission. Mr. Spingler/Offered periodically

FRENCH 163 HISTORY OF FRENCH CINEMA: BEFORE WORLD WAR II/ LECTURE, DISCUSSION

A study of the major experiments and classical traditions of French cinema prior to 1940. Through close analysis of films, film scripts, criticism, and some film theory, the course emphasizes the development of film as an art and the importance of the cinema to French culture and society. Film screenings include the work of René Clair, Louis Delluc, Abel Gance, Man Ray, Fernand Léger, Germaine Dulac, Jean Vigo, Jean Cocteau, Jean Renoir, Jean Grémillon, and Marcel Carne. Taught in English and French sections. Prerequisite for students receiving French credit: two courses at the 130 level. Ms. Butzel/Offered every other year

FRENCH 165 FRENCH PLAY PRODUCTION/LECTURE, DISCUSSION

A workshop course using scene study to provide direct experience of the theatrical synthesis within which play, actor, and spectator operate. Particular attention is paid to problems of vocal delivery through intensive work on diction, phrasing, rhythm, and gesture. In this way the course offers the student considerable practice in oral French. The course also explores various approaches to the staging of the plays. In general one playwright is studied during the entire semester and topics of theatrical practice are combined with theoretical issues concerning the social background and artistic conventions of the playwright's period. Playwrights studied may be: Moliére, Marivaux, Ionesco, Beckett. Conducted in French. Prerequisite: one 130 level course or permission. Mr. Spingler/Offered every other year

FRENCH 167 FRENCH CINEMA: THE NEW WAVE/LECTURE, DISCUSSION

Focuses primarily on the ground-breaking films of Jean-Luc Godard, which profoundly changed the "look" of contemporary cinema including American films. We view films by other members of the New Wave including François Truffaut, Louis Malle, and Claude Chabrol, but the course primarily explores how Godard's radical transformations of film form reflected the crisis in cultural and political consciousness in France in the 1960s. Taught in English and French sections. Prerequisite for French credit: two third-year-level courses or permission. Mr. Spingler/ Offered periodically

FRENCH 170 THE MODERN FRENCH THEATER: EXPERIMENTS OF THE AVANT-GARDE/LECTURE, DISCUSSION

A study of the origins and developments of the avant-garde theater of France with particular emphasis on the staging of the plays. The course focuses on the theater since 1950, especially works by Ionesco, Beckett, Genet, and Arrabal. Also explores the affinities between these playwrights and the Dada and Surrealist movements and studies three precursors: Jarry, Ghelderode, and Artaud. Conducted in French. Prerequisite: one course at the 130 level or permission. Mr. Spingler/ Offered periodically

FRENCH 171 VISIONS OF CHANGE IN EIGHTEENTH-CENTURY LITERATURE/LECTURE, DISCUSSION

This course examines how eighteenth-century literature endeavors to generate new frames of thinking and new definitions (in such areas as politics, society, education, the family) essential to producing change. Attention is given to the diverse aesthetic modes used to carry out such a project (utopian travel accounts, philosophical tales and treatises, etc.). Readings from Voltaire, Rousseau, Diderot. Taught in French. Prerequisite: two third-year-level courses or equivalent. Ms. Voiret/Offered every other year

FRENCH 174 STUDIES IN AUTOBIOGRAPHY/LECTURE, DISCUSSION

An exploration of the evolution of modes of subjectivity in French literature through major works of self-analysis and autobiography. For each writer, we explore the interplay between memory, self-creation, and narrative form as expressions of a particular sensibility in a particular historical period. Readings include Rousseau, Stendhal, Beauvoir, Sartre, Barthes, and Duras, and critical essays about each writer. Students are asked to write an autobiographical essay as part of their final project. Ms. Kaufmann/Offered every other year

FRENCH 180 ART OF THE CITY: POETS AND PAINTERS OF PARIS/SEMINAR

This course investigates the changing urban consciousness of nineteenth-century France by examining problems of representing the city through urban planning (architecture and urban landscape), and through the visual representation of Paris by two painters, Caillebotte and Manet, and the literary representation of Paris by two poets, Baudelaire and Rimbaud. Given in French. Prerequisite: two 130 level courses or permission. Mr. Spingler/Offered periodically

FRENCH 183 NARRATIVES OF MODERNITY/LECTURE, DISCUSSION

Readings and discussions of selected narrative texts from the nineteenth and twentieth centuries. Works from several narrative forms such as the short story, the novel, the experimental short film, and the feature film are studied as examples of changing representations of "modern" social and psychological life. Particular emphasis is given to relating these narrative texts to the development of mass and artistic culture in France from the early modern to the postmodern period. Texts include fiction by Balzac, Flaubert, Zola, Gide, and films by Clair, Dulac, Bresson, Duras, Marker, and Godard. Prerequisite: two courses at the 130 level in French. Ms. Butzel/Offered periodically

FRENCH 185 WOMEN'S WRITING IN TWENTIETH-CENTURY FRANCE/LECTURE, DISCUSSION

The course is a study of major works of fiction and theory as they question and illuminate each other. We explore these works in the context of the French feminist controversy between theories of sexual equality and theories of sexual difference, particularly as they relate to notions of a distinctive écriture féminine. Readings include texts by Colette, Simone de Beauvoir, Hélène Cixous, Marguerite Duras, Luce Irigaray, Monique Wittig and Julia Kristeva. Conducted in French. (A modified version of this course is offered periodically in English as Comparative Literature 215.) Ms. Kaufmann/Offered every other year

FRENCH 187 LOVE IN THE FRENCH LITERARY TRADITION/ LECTURE, DISCUSSION

Through the historical examination of a tradition in French literature that has shaped Western notions of love and desire, we try to come to an understanding of how these notions have been culturally produced, and how they affect our fantasies and realities. Readings include: *Tristan et Iseut*; Mme. de Lafayette, *La Princesse de Clèves*; Laclos, *Les Liaisons Dangereuses*; Flaubert, *Madame Bovary*; Duras, *L'Amant*. Literary readings are in conjunction with relevant French theoretical texts on the problematics of desire. Ms. Kaufmann/Offered periodically

FRENCH 191 FRENCH VERSUS AMERICAN TELEVISION/ LECTURE, DISCUSSION

An advanced course in the cultural study of television and related audiovisual media in France and the Francophone world. Readings in screen theory, cultural criticism, and social theory provide students with a conceptual framework for the analysis of French programming in regional, national, and international contexts. Prerequisite: two courses at the 130 level in French. Ms. Butzel/Offered every other year

FRENCH 206 SPECIAL TOPICS IN FRENCH/SEMINAR

Offered for variable credit. Staff/Offered every semester

FRENCH 251 MASCULINITY AND FEMININITY IN FRENCH LITERATURE/LECTURE, DISCUSSION

This course examines diverse representations of femininity in French literature. It compares the different meanings ascribed to that notion with special focus on historical and cultural aspects. Readings include: Racine, *Andromaque*; Rousseau, *Emile, la Nouvelle Héloise*; Stendhal, *Le Rouge et le Noir*; Genet, *Le Balcon*; Duras, *Barrage Contre le Pacifique*. Taught in French. Prerequisite: Two third-year-level courses or equivalent. Ms. Voiret/Offered every other year

FRENCH 295 ADVANCED TOPICS FRENCH/SEMINAR

A research seminar involving close reading and independent research on various topics in literature and culture. Topics vary according to the instructor but are sufficiently wide-ranging to allow the student to identify an area of personal interest. Modified versions of courses above the 180 level are offered periodically for 199 credit. Required of majors. All others by permission. Ms. Kaufmann, Mr. Spingler, Ms. Butzel/Offered every year

FRENCH 299 FRENCH, GERMAN, SPANISH: SEMINAR IN FOREIGN LANGUAGE TEACHING-LEARNING/SEMINAR

This ongoing seminar is especially arranged for our foreign language teaching assistants. Its goal is to explore different theories of foreign language learning and the methods and strategies developed from them. Students draw upon their own experiences as teachers and learners in the foreign language classroom in order to evaluate the strengths of different instructional approaches and improve their own teaching skills. Joint sessions with faculty are scheduled at regular intervals. Staff/ Offered every year

Courses Offered at the Universite De Bourgogne, Dijon, France

Students who participate in Clark's study abroad program at the Université de Bourgogne may take up to 8 course units in French and other fields. Courses are offered both in the Faculté des Lettres and the Faculté de Droit and at the Centre International d'Etudes Françaises (CIEF). The following is a representative list of courses which have been offered in the past:

Faculté de Lettres et Faculté de Droit

Thème et Version -
Translation Workshop French-English and English-French

Littérature française -
Romantisme et Modernité

Littérature française -
L'Univers balzacien

Littérature française -
Le Roman au XVIIe et XVIIIe siècles

Littérature comparée -
Paris entre les deux guerres
Littérature comparée-
Images de la femme dans la littérature française

Histoire de L'Art médiévale

Histoire de la Bourgogne médiévale

Histoire économique et sociale

Initiation à l'histoire rurale

Institutions politiques comparées

Analyse de la vie politique

Politiques européennes

Centre Internationale d'Etudes françaises

Composition et expression écrite -
Advanced written French

Grammaire

Stylistique

La littérature et ses genres

Civilisation: La France contemporaine

Histoire de l'art:
La peinture française au milieu du XIXe siècle

Culture et musique

Cinéma

Théâtre contemporain

Les philosophies de l'existence en France

Histoire de la Troisième République

Français économique et commerciale

C. GERMAN

GERMAN 101-102 INTRODUCTORY GERMAN/LECTURE, DISCUSSION

Designed to impart an active command of the German language. It combines the study of grammar with oral practice and readings in literary and expository prose. No credit is given for German 101 until successful completion of German 102. Mr. Kaiser, Mr. Schatzberg/Offered every year

GERMAN 103 INTERMEDIATE GERMAN I/LECTURE, DISCUSSION

This course offers consolidation of basic skills in German for students who have completed German 102 or the equivalent. The course includes a systematic review of German grammar and reading and discussion of selections adapted from German language newspapers and magazines. Our aim is to develop skills in oral and written expression. There are weekly conversation groups with a native German speaker as well as individual laboratory work. Prerequisite: German 102 or equivalent. Staff/Offered every year

GERMAN 104 INTERMEDIATE GERMAN II/LECTURE, DISCUSSION

This course serves as a bridge between the basic skills courses and the advanced courses in language, literature, and culture. During the first half of the semester the systematic review of grammar is completed. Subsequently greater emphasis is placed on the study of selected literary works to acquaint students with major themes of contemporary German culture. Our aim is to develop the ability to articulate ideas and to participate in discussions in German. There are weekly conversation groups with a native German speaker as well as individual laboratory work. Prerequisite: German 103 or equivalent. Staff/Offered every year

GERMAN 106 SPECIAL TOPICS IN GERMAN

Offered for variable credit. Staff/Offered every semester

GERMAN 131 SPOKEN AND WRITTEN GERMAN/LECTURE, DISCUSSION

This third-year course aims at strengthening good speech habits with regard to German grammar and syntax, at expanding the active vocabulary, and at improving students' ability to express themselves in writing. Literary and journalistic texts serve as a basis for discussion of important issues in contemporary German. Weekly written assignments. Recommended for majors. Prerequisite: German 104 or equivalent. Mr. Kaiser/Offered every year

GERMAN 134 WORKSHOP IN TRANSLATION/LECTURE, DISCUSSION

Gives students a practical, concrete experience of what it means to "translate" from one language into another. The student sees that the process is not nearly so simple as it may have seemed, but that there is a scale of texts, which range from the relatively easy to those that virtually defy rendering into another tongue. In the more difficult cases, it is demonstrated that there is no such thing as a mere rendering of a text into another language, but that the process in, say, poetry, requires transposition of a whole cultural reflex into another. Various kinds of texts are examined, from the sober style of the scientific article to the emotionally charged language of lyric poetry. Prerequisite: German 104 or equivalent. Mr. Hughes/Offered every other year

GERMAN 140 MODERN GERMAN PROSE/LECTURE, DISCUSSION

Designed to familiarize the student with German prose by Kafka, Hesse, Mann, Böll, Grass, Plenzdorf, and Wolf; includes discussions, oral and short written reports in German. Prerequisite: German 131 or equivalent. Mr. Hughes/Offered every other year

GERMAN 145 THE GERMAN NOVELLE/LECTURE, DISCUSSION

A historical and critical study of this uniquely German genre. Particular attention is paid to narrative technique and to the typical features of the novelle distinguishing it from the short story on the one hand and from the novel on the other. Selections range from early romanticism to Thomas Mann. Where applicable, a number of poems by the author under consideration are discussed. Prerequisite: German 131 or equivalent. Mr. Kaiser/Offered every other year

GERMAN 156 THE MODERN GERMAN SHORT STORY/ LECTURE, DISCUSSION

After years of isolation and stagnation during the Nazi period and after its collapse in 1945, young writers, eagerly trying to establish new values and anxious to link up again with international literary developments, discovered the English and American short story with its well-established tradition. They adapted this model to the historical, social, and cultural conditions in Germany. The short story became the most important literary form during the post-war years and has maintained its significance to the present time. This course involves a careful reading of representative examples by leading modern German writers with special emphasis on thematic variety and structural complexities of the genre. Prerequisite: German 131 or equivalent. Mr. Hughes/Offered every other year

GERMAN 166 GERMAN DRAMA FROM LESSING TO BRECHT/ LECTURE, DISCUSSION

Includes reading and discussion of representative plays by the chief German dramatists from the end of the eighteenth to the early twentieth century. Focuses on the sociopolitical aspects of these works, the aims and concepts of the dramatic art, and the changing traditions of playwriting. Authors include Lessing, Goethe, Schiller, Kleist, Büchner, Schnitzler, Kaiser, and Brecht. Prerequisite: German 104 or equivalent., Mr. Kaiser/ Offered every other year

GERMAN 206 SPECIAL TOPICS IN GERMAN

Offered for variable credit. Staff/Offered every semester

■ GERMAN LITERATURE COURSES CONDUCTED IN ENGLISH

GERMAN 112 THE FAIRY TALES OF THE BROTHERS GRIMM/LECTURE, DISCUSSION

Fairy tales are among the oldest and simplest forms of literature. They communicate archetypal patterns of human experience and societal behavior; they reflect human wisdom of all ages derived from all cultures; their moral teaching is universal and universally applicable. The well-known collection of the Brothers Grimm includes 210 fairy tales; about half of them are studied using different approaches to textual analysis in order to acquaint students with a variety of critical methods. No prerequisites. Mr. Kaiser/Offered every other year

GERMAN 168 MUSIC IN GERMAN LITERATURE AND THOUGHT/ LECTURE, DISCUSSION

Countless musicians, philosophers and writers have speculated on the nature of music, its mysterious power to influence people and to communicate strong feelings. The prominence which music as an autonomous art form has achieved since the Baroque era has inspired an ever-growing number of authors to incorporate a wide range of music experiences in their writings. Works by the following authors will be studied: Wackenroder, Kleist, E.T.A. Hoffman, Heine Mörike, Schopenhauer, Wagner, Nietzsche, Hesse, Beheim-Schwarzbach and Thomas Mann. A small number of operas will also be discussed (Mozart, Beethoven, Weber, Wagner, Strauss). Special emphasis will be placed on the study and evaluation of literary and musical forms and structures. The course hopes to offer glimpses into the excitement of interdisciplinary approaches and of the humanistic, even political spirit that enlivens the study of literature. No prerequisites, but an appreciation for music and literature is necessary. Fulfills the aesthetic perspective. Mr. Kaiser/ Offered every other year

GERMAN 188 THE CULTURE OF THE WEIMAR REPUBLIC IN LITERATURE, FILM, AND THE ARTS/LECTURE, DISCUSSION

Examines social and political satire and efforts at cultural regeneration between the First World War and the rise of Nazism. The following works are studied within the context of the period:

Prose: Hesse's *The Steppenwolf*, Döblin's *Berlin Alexanderplatz*, Remarque's *All Quiet on the Western Front*

Drama: Brecht's *A Man's a Man*, *St. Joan of the Stockyards*, *The Measures Taken*; Zuckmayer's *The Captain from Koepenick*

Musicals: *Rise and Fall of the City of Mahagonny*, *The Three Penny Opera* (Brecht/Weil)

Film: M, *The Blue Angel*, *The Three Penny Opera*, *Berlin Alexanderplatz*, *Kuhle Wampe*

Painting: Georg Gross, Max Beckman, Otto Dix

Architecture: The Bauhaus School

This course is conducted in English, but students may receive German credit by participating in a German language tutorial and reading selected works in German. Mr. Schatzberg/Offered every other year

GERMAN 192 RICHARD WAGNER'S MUSIC DRAMAS: MYTH AND INNOVATION/SEMINAR

Richard Wagner, poet and composer at the same time, has been one of the most influential figures in German and European culture during the last 150 years. In spite of the considerable controversy that he aroused—and still arouses—as a person and artist, international interest in his music dramas has been increasing in recent decades. This course concentrates on his major work, *The Ring of the Nibelung*, a cycle of four operas (*The Rhinegold*, *The Valkyrie*, *Siegfried*, and *Twilight of the Gods*), one of the most ambitious and complex musico-dramatic achievements in the European tradition. An earlier and a later work, the transitional *Lohengrin*, and *Tristan and Isolde*, a true landmark in musical history, also are studied. Equal emphasis is placed on an examination of Wagner's mythological and literary sources, the predominant themes of his works, their psychological, philosophical and sociological implications, and on his various musical innovations such as the use of the orchestra as a major character in the structure of the drama, the leitmotiv and its transformations, singing style, and aspects of expanded chromatic harmony. The course also investigates Wagner's theater reform and his impact on writers and composers up to the present time. Mr. Kaiser, Mr. Belet/Offered periodically

GERMAN 199 ADVANCED TUTORIAL IN GERMAN LITERATURE/LECTURE, DISCUSSION

The content of this course is determined by the needs and interests of individual students. Ordinarily it is taken by majors in their senior year and as a capstone experience. Other advanced students of German language and literature may be invited to participate in the tutorials as space permits. Staff/Offered every year

GERMAN 299 FRENCH, GERMAN, SPANISH: SEMINAR IN FOREIGN LANGUAGE TEACHING-LEARNING/SEMINAR
See description under French 299. Staff/Offered every year

D. HEBREW

HEBREW 101-102 ELEMENTARY HEBREW/LECTURE, DISCUSSION
Modern conversational Hebrew. Emphasis on speaking, reading, writing, and listening skills. Acquisition of vocabulary and basic grammar through conversation, drills, reading of simple texts, and listening to tapes. Two seventy-five minute class meetings per week plus one hour of mandatory drill sessions led by a teaching assistant and one hour of individual work in the language laboratory. No credit is given for Hebrew 101 until successful completion of Hebrew 102. Ms. Barone/Offered every year

HEBREW 103 INTERMEDIATE HEBREW/LECTURE, DISCUSSION
Modern conversational Hebrew. Emphasis on speaking reading, writing, and listening skills. Enrichment and reinforcement of verbal expressions and grammatical structures. Classes meet twice weekly for seventy-five minutes and are supplemented by individual work in the language laboratory and one hour of mandatory drill sessions led by a teaching assistant. Hebrew 102 or the equivalent required. Ms. Barone/Offered every year

HEBREW 104 INTERMEDIATE/ADVANCED HEBREW/LECTURE, DISCUSSION
A survey of significant Hebrew texts. Literature and newspapers are employed. Enrichment of verbal and written expression and grammatical structures. Classes meet twice weekly and are supplemented by individual work in the language laboratory and one hour of drill. Hebrew 103 or the equivalent required. Ms. Barone/Offered every year

HEBREW 105 ADVANCED HEBREW/LECTURE, DISCUSSION
Intended for students who have studied the basics of Hebrew grammar. This course will reinforce conversational and grammatical skills through discussion, composition, and reading Hebrew literature as well as newspapers. Prerequisite: Hebrew 104 or the equivalent required. Ms. Barone/Offered periodically

HEBREW 299, SEC. 6 SPECIAL TOPICS IN HEBREW/DISCUSSION
This course presents modern Hebrew literature, predominantly in the original language. Through poetry, short fiction, and current journalism, the course examines major issues in Israeli culture: the early immigrant experience, the Holocaust, and the Arab-Israeli conflict. It also considers the historical dimension of the Hebrew language: how some words hearken back to the Bible, while others are inventions of the past century. Students enrich their verbal and written expression and study increasingly complex grammatical structures. Ms. Barone/Offered periodically

E. JAPANESE

JAPANESE 101-102 ELEMENTARY JAPANESE/LECTURE, DISCUSSION
An introduction to the Japanese language, with emphasis on speaking, listening, reading, and writing. In addition to spoken Japanese, students learn hiragana and katakana in the first semester, and begin learning kanji in the second. Staff/Offered every year

JAPANESE 103-104 INTERMEDIATE JAPANESE/LECTURE, DISCUSSION

A continuation of first-year Japanese, with emphasis on learning kanji, mastering more complex grammatical forms, and increasing fluency in spoken Japanese. Prerequisite: Japanese 101-102 or permission. Staff/Offered every year

JAPANESE 105-106 ADVANCED JAPANESE/LECTURE, DISCUSSION

The course is designed to develop the skill of composing memos and negotiating with the Japanese by utilizing the newest materials available in Japanese. Primary emphasis is on building critical vocabulary and understanding Japanese behavior patterns. Prerequisite: Japanese 103-104 or permission. Ms. Aoki/ Offered every year

JAPANESE 283 JAPANESE CULTURE AND ECONOMIC DEVELOPMENT/LECTURE, DISCUSSION

Refer to course description under History 283. Ms. Aoki/Offered periodically

JAPANESE 285 JAPANESE FOLKLORE/LECTURE, DISCUSSION

Refer to course description under History 285. Ms. Aoki/Offered periodically

JAPANESE 289 JAPANESE THOUGHT/PROSEMINAR

Refer to course description under History 289. Ms. Aoki, Mr. Tanaka/Offered periodically

F. RUSSIAN

Clark students may take additional courses in Russian language and literature at the College of the Holy Cross through the Worcester Consortium for Higher Education.

RUSSIAN 101-102 INTRODUCTORY RUSSIAN/LECTURE, DISCUSSION

Designed for students with no background in Russian. Focus on all four skills: listening, speaking, reading, and writing. Students are exposed to various aspects of Soviet and Russian culture through video programs, films, field trips, special lectures, reading materials, and the press. The class meets three times a week; oral practice twice a week with a Russian teaching assistant. Individual work in the language laboratory. No credit will be given for Russian 101 without successful completion of Russian 102. Ms. Macaulay/Offered every year

RUSSIAN 103-104 INTERMEDIATE RUSSIAN/LECTURE, DISCUSSION

Students expand their basic skills and focus on idiomatic usage in oral and written expression. Students read representative Russian prose. The class meets three hours a week and twice a week with a Russian teaching assistant. Work with video programs and Russian TV programs. Prerequisite: Russian 101-102. Ms. Macaulay/Offered every year

RUSSIAN 106 DIRECTED READINGS

Students interested in specific authors and/or topics in Russian literature and civilization may receive instruction and guidance in either English or Russian. Offered for variable credit. Mr. Hughes/Offered every year

RUSSIAN 299, SEC. 6 SPECIAL TOPICS IN RUSSIAN/DISCUSSION

This course emphasizes the development of practical language skills in Russian. Weekly conversation sessions deal with everyday situations such as using the telephone, writing a journal, reading menus, buying theater tickets, filling out applications, and reading

Russian newspapers and short stories; these activities, combined with viewing Russian television broadcasts and Russian films, are intended to develop an increased understanding of advanced Russian grammar. Ms. Macaulay/Offered every year

■ RUSSIAN LITERATURE COURSES CONDUCTED IN ENGLISH

RUSSIAN 187 RUSSIAN TWENTIETH CENTURY LITERATURE IN TRANSLATION/LECTURE, DISCUSSION

Focus on representative Russian literary works of the twentieth century in their historical context. Topics include the Silver Age, the 1920s, Socialist Realism, The Thaw, Village Prose, the "gulag" literature, and the newest post-Soviet works. Texts by such authors as Bely, Mayakovsky, Gorky, Zamyatin, Bulgakov, Pasternak, Nabokov, Rasputin, Shukshin, Solzhenitsyn, Baranskaya and Ratushinskaya. Some readings in Russian poetics. Ms. Macaulay/Offered periodically

RUSSIAN 220 THE RUSSIAN NOVEL IN THE NINETEENTH CENTURY/LECTURE, DISCUSSION

An examination of representative great Russian works of the last century in English translation. They are considered both as works of literary art and as social and historical artifacts. Readings include Tolstoy's *Anna Karenina*, Turgenev's *Fathers and Children*, and representative works of Pushkin, Gogol, Dostoevsky and Chekhov. Mr. Hughes/ Offered every other year

G. *SPANISH*

SPANISH 101-102 ELEMENTARY SPANISH/LECTURE, DISCUSSION

For students with no previous knowledge of the language, this course is aimed at developing basic skills in speaking, reading, and writing Spanish. The class meets for three hours per week; regular class assignments are supplemented by individual work in the language laboratory. No credit is given for Spanish 101 until successful completion of Spanish 102. Mr. D'Lugo, Ms. D'Lugo, Ms. Acosta Cruz/ Offered every semester

SPANISH 103 ELEMENTARY SPANISH: INTENSIVE/LECTURE, DISCUSSION

An accelerated elementary course, intended for students who have had more than two years of high-school Spanish but who do not yet qualify for intermediate-level courses. Three hours per week, plus individual work in the language laboratory. Mr. D'Lugo, Ms. Montross, Staff/Offered every semester

SPANISH 105 INTERMEDIATE SPANISH I/LECTURE, DISCUSSION

The first of the intermediate-level courses, Spanish 103 strengthens basic skills in the language through a variety of exercises, including taped interviews with native speakers, improvisational acting, and discussions centered around readings on Hispanic culture and society. Grammar review is geared to the specific needs of the group. Prerequisite: Spanish 102. Ms. D'Lugo, Mr. D'Lugo, Staff/ Offered every semester

SPANISH 106 INTERMEDIATE SPANISH II/LECTURE, DISCUSSION

Normally taken after 103, Spanish 104 includes more extensive readings on Hispanic themes as the basis for class discussion and student essays. Emphasis is on activities in reading, writing, speaking, and conversational understanding as a preparation for more advanced work. Prerequisite: Spanish 103. Ms. Montross, Staff/Offered every semester

SPANISH 127 PRACTICE IN ORAL AND WRITTEN SPANISH/ LECTURE, DISCUSSION

A transitional course between intermediate Spanish and the upper-level offerings, intended to help students develop fluency and sophistication in spoken and written Spanish. Classes emphasize practice in conversation, composition, and advanced grammar review. Prerequisite: Spanish 104. Ms. D'Lugo, Mr. Ferguson, Staff/Offered every semester

SPANISH 131 READINGS IN HISPANIC LITERATURES/ LECTURE, DISCUSSION

An introduction to modern Hispanic narrative, lyric, and dramatic literature. The course covers representative authors of both Spain and Latin America; works are studied with a view to their literary, social, cultural, and political context. Readings are chosen to illuminate a particular theme that changes each semester: for example, the idea of cultural continuity and modernity, notions of norm and deviance in the Hispanic community, or the concept of revolution as a collective and individual ideal. Since course content is variable, students may request permission to take the course twice. Conducted in Spanish. Prerequisite: Spanish 127. Required for majors. Variable topic; repeatable by permission of instructor. Ms. D'Lugo, Mr. D'Lugo, Mr. Ferguson, Ms. Acosta Cruz/Offered every year

SPANISH 133 HISPANIC THEMES/ LECTURE, DISCUSSION

A third-year course designed to introduce the student to the diversity of Hispanic culture through a variety of readings from literature, history, and cultural anthropology, as well as current periodicals in Spanish. The course focuses on one or two of the following national cultures: Chile, Cuba, Mexico, Spain, Argentina. Topics normally covered include parallel development of Anglo-American and Hispanic cultural institutions, changing identity of the family and the individual in twentieth-century society, the emerging identities of women in these societies, and a comparison with the traditional Hispanic definition of women's role. Conducted in Spanish. Prerequisite: Spanish 131. Required for majors. Ms. Acosta Cruz, Mr. Ferguson, Ms. D'Lugo/Offered every year

SPANISH 136 WOMEN IN HISPANIC LITERATURE/ LECTURE, DISCUSSION

A study of the presence of women in Hispanic literature, with a special emphasis on the twentieth century. Topics to be discussed include alienation, identity, family structure, violence against women, and problematical relationships to the patriarchal social order. Readings include major works from both the Spanish and Latin American tradition. Conducted in Spanish. Prerequisite: Spanish 131. Ms. D'Lugo, Staff/Offered every other year

SPANISH 137 ADVANCED ORAL AND WRITTEN SPANISH/ LECTURE, DISCUSSION

An advanced language course that offers a rapid review of grammar with exercises in composition, pronunciation, and intonation. Conducted in Spanish. Prerequisite: Spanish 131. Required for majors. Ms. Acosta Cruz, Ms. Montross/Offered every year

SPANISH 138 HISPANIC LITERATURE OF POLITICAL COMMITMENT/LECTURE, DISCUSSION

A study of the creative writer's position vis-à-vis the demands of revolutionary change in the twentieth century. Writers discussed include Pablo Neruda, César Vallejo, Ernesto Cardenal, Francisco Ayala, and Miguel Hernández; Cuban writers and poets in their sometimes ambiguous relationship to their country's revolution; the writers of the Chicano movement and the dream of Aztlán; and Puerto Rican authors, both on the mainland and on their native island. Conducted in Spanish. Prerequisite: Spanish 131 or permission. Mr. Ferguson/Offered every other year

SPANISH 139 HISPANIC CARIBBEAN FICTION/ LECTURE, DISCUSSION

Readings and discussions of selected works by the principal figures in Spanish-language fiction from the Caribbean Basin. Works studied are mostly from the nineteenth and twentieth centuries. Representative works from all genres are examined in order to review the literary expression and major concerns of Hispanic Caribbean literature such as Afro-Antillean cultural movements, neobaroque literature, and literary search for national identity. Conducted in Spanish. Prerequisite: Spanish 131. Ms. Acosta Cruz/Offered every other year

SPANISH 140 SPANISH DRAMATIC EXPRESSION: PLAY PRODUCTION/ LECTURE, DISCUSSION

Intended to acquaint the student with the rhythms, intonations, and gestures typical of contemporary spoken Spanish. Through the study and eventual presentation of two or more contemporary dramatic works, students gain practical experience in linguistic and cultural skills. Although some consideration is given to the texts as literature, the course is primarily a workshop in advanced oral Spanish. Prerequisite: Spanish 104. Staff/ Offered every other year

SPANISH 141 SPANISH TRANSLATION WORKSHOP/ LECTURE, DISCUSSION

A course intended to enable students to translate a wide variety of texts (including commercial and technical documents) from Spanish into English, and vice versa. Classes alternate between formal sessions, in which basic linguistic theory is taught, and workshop sessions, in which students use the techniques learned to translate printed material. Prerequisite: Spanish 131. Staff/Offered every other year

SPANISH 142 THE LATIN AMERICAN NOVEL

Readings and discussions of selected works by some of the principal novelists in contemporary Latin American fiction. Emphasis is placed on technical innovations and their relation to social and political thematics. Relevant critical, historical, and cultural material will be included in order to provide a context for the creative surge reflected in twentieth century narrative practice. Authors usually include García Márquez, Vargas Llosa, Cortázar, Puig, Fuentes, and a representative of the more recent feminist writers. Prerequisite: Spanish 131 or permission. Ms. D'Lugo/Offered every other year

SPANISH 143 LATIN AMERICAN ESSAY AND THOUGHT/LECTURE, DISCUSSION

Overview of history and development of Latin

American culture throughout the nineteenth and twentieth centuries. The course explores the ways in which Latin American writers have tried to define what Latin America is, and how they have sought to differentiate its culture from that of traditional European thought. Conducted in Spanish. Prerequisite: Spanish 131 or permission. Ms. Acosta Cruz, Mr. Ferguson/Offered every other year

SPANISH 145 HISPANIC AMERICAN SHORT STORY/ LECTURE, DISCUSSION

An introduction to the tradition and development of short narrative in Hispanic America, from its beginnings in colonial chroniclers through the progressive refinements of theme, local color, style, and narrative technique that led to the fictions of the twentieth-century "Boom" and beyond. Readings include works by Rubén Darío, Horacio Quiroga, José Luis Borges, Carlos Fuentes, Julio Cortázar, Juan Rulfo. Conducted in Spanish. Prerequisite: Spanish 131 or permission. Mr. Ferguson, Ms. D'Lugo/Offered every year

SPANISH 146 INTRODUCTION TO CINEMA IN SPAIN/LECTURE, DISCUSSION

A historical survey of principal Spanish films and filmmakers of the past fifty years in the context of political and social change in Spain. Among the issues under consideration are the formulation of a cultural ideology through *franquista* cinema in the 1940s and the rise of opposition cinema in the 1950s until 1975, the operations of film censorship, the rise of regional film cultures in post-Franco Spain, and auteurism and the national/international audiences of Spanish cinema. Conducted in Spanish. Mr. D'Lugo/Offered every other year

SPANISH 147 STUDIES IN SPANISH CINEMA/LECTURE, DISCUSSION

This course is designed to provide students with the opportunity to explore in close detail a number of issues related to the development of film and film culture in Spain. Topics vary each time the course is offered. Sample topics: Film auteurs (Almodóvar, Borau, Buñuel, Gutiérrez, Aragón, Saura); Spanish and foreign constructions of national identity through cinema; female empowerment. Conducted in English. Mr. D'Lugo/Offered every other year

SPANISH 148 INTRODUCTION TO CINEMA IN LATIN AMERICA/ LECTURE, DISCUSSION

A survey of representative film cultures, directors, and works in Latin America, with special emphasis on developments in Argentina, Brazil, Cuba, and Mexico. Among the issues under consideration are the politics of representation, cultural nationalism in Latin American cinema, issues of authorship, and alternative film practices in Third World cinema. Conducted in English; Spanish major credit available. Mr. D'Lugo/Offered every other year

SPANISH 149 STUDIES IN LATIN AMERICAN CINEMA/LECTURE, DISCUSSION

This course is designed to provide students with the opportunity to explore in close detail a number of issues related to the development of film and film culture in Latin America. Topics vary each time the course is offered. Sample topics: Film auteurs: (Alea in Cuba;

Solanas in Argentina; Diegues in Brazil; "Indio" Fernández in Mexico); race, gender, and ethnicity in various Latin American cinemas; cinema as political intervention. Conducted in English. Mr. D'Lugo/Offered every other year

SPANISH 160 THE AGE OF CERVANTES/LECTURE, DISCUSSION

An introduction to Spanish literature and society in the Golden Age, from the era of the Catholic monarchs to the death of Cervantes and beyond. Through a close examination of representative works in a variety of genres, the course traces the development of the Spanish imagination from the flowering of Renaissance humanism through the Counter-Reformation and the birth of the baroque, a profile of the brilliance and despair that characterizes Spain in these imperial centuries. Conducted in Spanish. Prerequisite: Spanish 131 or permission. Mr. Ferguson/Offered every other year

SPANISH 180 LATIN AMERICAN LITERATURE IN TRANSLATION/LECTURE, DISCUSSION

This course examines major works of Latin American literature, including the Spanish-speaking countries and Brazil, with an emphasis on the cultural, political, and social context in which these literatures function. Topics include "Boom" and post-"Boom" literature, the realist novel and reactions against it, women writers, ideas of cultural identity, the role of the author in Latin America, and the effects of major historical events such as the Cuban Revolution. Different genres will be covered. Conducted in English; major credit in Spanish available. Prerequisite: permission of instructor. Ms. Acosta Cruz, Ms. D'Lugo/Offered every other year

SPANISH 199, SEC. 7 ADVANCED TOPICS/SEMINAR

Close readings and discussion of representative works by major Spanish writers of the premodern period. Ordinarily it is a required course for majors in their senior year as a capstone experience. Topics for 1994-96: the Mexican novel, Galdós, the Spanish Baroque, and *Don Quijote*. Conducted in Spanish. Ms. D'Lugo, Mr. D'Lugo, Ms. Acosta Cruz, Mr. Ferguson/Offered every year

SPANISH 206 SPECIAL TOPICS IN SPANISH/SEMINAR

Offered for variable credit. Staff/Offered every semester

SPANISH 207 FIELD WORK IN THE HISPANIC COMMUNITY/SEMINAR

This course offers an opportunity to work in one of a variety of community agencies and projects serving the Hispanic community in Worcester (the bilingual school program, Casa de la Comunidad, Worcester Legal Services, etc.). Student work is supervised by a campus advisor and a designated supervisor from the cooperating agency; the student is also expected to keep a journal—to be submitted at the end of the semester—in which particulars of language, culture, and related problems of the bilingual community are critically examined. Prerequisites: proficiency in Spanish; successful completion of course work in the field or fields related to the specific project area; permission of instructor. Offered for variable credit. Ms. Montross/Offered every year

SPANISH 299 FRENCH, GERMAN, SPANISH: SEMINAR IN FOREIGN LANGUAGE TEACHING-LEARNING/SEMINAR

See description under French 299. Staff/ Offered every year

Geography

GRADUATE SCHOOL OF GEOGRAPHY FACULTY

David P. Angel, Ph.D., director: urban/economic geography, social theory

Martyn J. Bowden, Ph.D.: cultural humanistic and historical/urban/social geography

J. Ronald Eastman, Ph.D.: cartography, geographic information systems

Jacque L. Emel, Ph.D.: resource/environmental geography, feminist theory

Susan Hanson, Ph.D.: urban/social geography, transportation, research methods, geography and gender

Stanley R. Herwitz, Ph.D.: biogeography, forest hydrology, watershed ecology, paleoecology

Douglas L. Johnson, Ph.D.: cultural ecology, arid lands management

Gerald J. Karaska, Ph.D.: urban/economic geography, regional development

Roger E. Kasperson, Ph.D.: hazards, global change, environment and society

William A. Koelsch, Ph.D.: history of geography, American thought and culture, ancient Mediterranean world

Laurence A. Lewis, Ph.D.: geomorphology, tropical agriculture, land degradation

Robert Cameron Mitchell, Ph.D.: environment and society, risk perception, survey research methodology

Richard Peet, Ph.D.: political economy of development, social theory, geography of consciousness

Samuel J. Ratick, Ph.D.: hazards, environment and public policy, modeling, quantitative methods

Dianne E. Rocheleau, Ph.D.: cultural/political/systems ecology, gender, forestry and agriculture, environment/development

Henry J. Steward, Ph.D.: cartography, history of cartography, remote sensing

B.L. Turner II, Ph.D.: cultural/human ecology, global change, Third World agriculture

AFFILIATE FACULTY

Leonard Berry, Ph.D.

Robert W. Kates, Ph.D.

STAFF

Anne Gibson, M.A.: research cartographer, cartographic lab manager

Jean Heffernan: assistant to the director

Beverly Presley, A.M.L.S.: map and geography librarian

EMERITI

Duane S. Knos, Ph.D.

Harry E. Schwarz, B.C.E., P.E.

The Graduate School of Geography was organized in 1921 and is now the oldest doctoral-granting department of geography in the United States. The School also offers an undergraduate major. The program emphasizes individual attention through close student-teacher relationships. For each of the past seven years, Rugg's Recommendations on the Colleges has identified the School of Geography at Clark as the best place at which to pursue an undergraduate geography major. The School also welcomes non majors in the many 0-level and 100-level courses that we offer on a wide range of topics.

■ ONGOING RESEARCH

Geography faculty and graduate students are involved in research on a wide variety of issues. Funded research projects within the School include local labor markets and women's employment, impacts of the Alaska oil spill, industrial restructuring, water policy in the southern Great Plains, perception of water quality, soil erosion in Central Africa, the evaporation of intercepted rainfall from tropical rainforest canopies, and Indian agriculture in the Americas in 1492.

A world-renowned center for research and teaching on human-environment relationships, the School of Geography at Clark and the George Perkins Marsh Institute are actively involved in research on global environmental change. Ongoing projects include developing computer software for global change analysis, investigating resource use in East Africa, and examining natural and technological hazards.

The Graduate School of Geography has several cooperative research agreements, including one with the Institute of Geography of the Russian Academy of Sciences. Several research projects involving global environmental research and geographic information systems are currently in progress. Exchanges of students involved in cooperative research are possible.

The School is also involved in an institutional cooperative agreement with the United States Agency for International Development (USAID) on the subject of Systems Approach to Regional Income and Sustainable Resource Assistance (SARSA); this project builds the institutional capacity of the University to support research and provide technical assistance to the overseas missions of USAID. Interdisciplinary in scope, this project is headed by Gerald J. Karaska and has ongoing projects on three continents.

■ GEOGRAPHY UNDERGRADUATE PROGRAM

The undergraduate program offers a major in geography, covering a three-year period (sophomore-senior) during which 50 to 80 percent of the student's course work is accounted for by program requirements that include courses in geography and related fields. A minimum set of required geography courses is built into the major, and coursework in related fields is selected in consultation with the student's advisor in light of individual needs and interests.

The departmental advisory system is headed by a central undergraduate advisor who advises all incoming majors. As students advance through the program, they may select another advisor whose interests best match their own. A geography major's courses for each semester must be approved by the advisor.

Emphasis in the undergraduate major is on broad training in the field of geography as well as on some specialization within the field. The department has facilitated specialization by organizing courses into areas of concentrated interest, or streams, and students are encouraged to take a series of courses in one or two of these streams. Within the streams, courses are sequential to allow a progressive building of knowledge and skills from 00-level to 100-level to 200-level courses. The streams at the undergraduate level are:

a) cultural/humanistic

b) environmental and resource

c) earth science and physical

d) international economies and development

e) urban/economic

f) mapping sciences

Geography majors are also required to become proficient in research methods and encouraged to gain skills in quantitative methods, computer programming, and mapping.

The Geography Student Organization (GSO) functions as a professional and social outlet for undergraduates. Students are encouraged to participate in its career seminars, trips, and other activities.

Gamma Theta Upsilon, the International Geography Honor Society, is open to geography majors who have taken at least 3 geography courses, maintain a B average in geography and are in the top 35 percent of their class. Alpha Sigma, the Clark chapter, originally established in 1951 and reactivated in 1991, currently lists 54 members.

■ REQUIREMENTS FOR GEOGRAPHY MAJORS

To graduate as a geography major, a student must complete the following requirements:

Within the School of Geography students must choose a total of 15 courses from the following:

A. Three courses selected from among the following: At least one must be from physical geography (either 014 or GEOL 100) and one from human geography (011, 016, 017, 019, 020, 085).

Geography 011, The World According to Geography
Geography 014, Introduction to Physical Geography
Geography 016, Introduction to International Economies
Geography 017, Introduction to Cultural Geography
Geography 019, Introduction to Environmental Geography: The Global Environment
Geography 020, Introduction to Urban and Regional Development
Geography 085, Introduction to the Mapping Sciences (to be offered during 1995-96)
Geology 100, Introduction to Geology

B. Three skills courses selected from among the following:

Geography 110, Computer and Quantitative Methods: Introduction
Geography 137, Time and Space in Old and New England (for students in the cultural/humanistic stream)
Geography 141, Research Methods in Geography

Geography 190, Introduction to GIS
Any cartography or remote sensing course (excluding 181)
Geography 213, Forest Hydrology Field Methods
Geography 247, Computer and Quantitative Methods: Intermediate

As another option, the department also accepts a second-year, second-semester language course as a skill. (Other courses equivalent to those listed above may be accepted by the student's advisor.)

C. Two geography courses in selected stream (at least one at the 200 level);

D. Two elective (in any stream) geography courses (at least one at the 200 level) (one may be cross-listed);

E. Geography 290, Capstone Seminar: Themes in Geography

F. Cognate courses: Four courses in disciplines related to the student's chosen field of interest. These courses must be approved by the faculty advisor.

■ REQUIREMENTS FOR GEOGRAPHY MINORS

For students minoring in geography, the requirements for coursework within the School of Geography are:

A. Two 0-level introductory courses (one from physical geography [either 014 or GEOL 100] and one from human geography [011, 016, 017, 019, 020, 085]);

B. One skills course, which does not duplicate a skill acquired as part of the major (see listing above—excludes language course);

C. Two elective courses in geography, at least one of which must be at the 200-level and in the student's focus of interest in geography;

D. Geography 290 (Senior Seminar), taken in the first semester of the senior year. Students must obtain a C- or better for credit toward geography requirements.

■ HONORS PROGRAM IN GEOGRAPHY

Students with an outstanding academic record are eligible to participate in the Geography Honors Program. To graduate with honors in geography the student must successfully complete either a one- or two-credit independent honors project conducted under the supervision of a faculty member.

The Geography Honors Program is open to juniors who, by the end of the first semester of the junior year, have a minimum grade point average of 3.25 overall and 3.5 in the geography major (geography courses and related courses) and who can demonstrate that they have the appropriate research background required to undertake independent geographic research.

The student who wants to carry out a two-semester honors thesis must register for geography honors the spring semester of the junior year and the fall semester of the senior year. A thesis proposal must be approved by the student's committee by November 1 in the student's junior year.

Students wishing to pursue a one-semester honors thesis can do so either in spring of the junior year or in fall of the senior year. The deadline for approval of the thesis proposal is November 1 of the junior year if the thesis is to be completed in the junior year. It is April 1 of the junior year if the thesis is to be written in the fall semester of the senior year.

Students interested in the Geography Honors Program should get additional details from the undergraduate advisor in the School of Geography.

For additional information, consult the *Geography Undergraduate Handbook*.

■ THE GRADUATE SCHOOL OF GEOGRAPHY PH.D. PROGRAM

Admissions

Applicants with or without prior training in geography are welcome. Depending on their concentrations, students may be required to improve their knowledge of geography, cartography, quantitative methods, or research methods. Courses taken to remedy any deficiencies will not count as part of the regular program.

Graduate Record Examination scores, verbal, quantitative and analytical, are required of all American and Canadian students. TOEFL scores or results of another English proficiency test are required for students from countries in which English is not the first language. The deadline for graduate applications is February 1.

Graduate Program

The graduate program of study in geography at Clark focuses on the Ph.D. degree, and only those students seeking full-time training for that degree are admitted into the program.

Degree Objectives

As prospective members of the geography community, graduate students work toward the following objectives:

1) development of extensive knowledge in the content of geography and competence in the use of research skills;
2) development of a sense of problem (research problems are at the core of an experiential learning process);
3) development of divergent thinking skills from which creative and original ideas evolve;
4) development of a sense of the tentativeness of knowledge and a patience with ambiguity;
5) development of a tough-minded learning discipline;
6) development of a sense of self-confidence and competence;
7) development of a sense of the nature of the community of geographers.

The program is designed to enable students to focus their learning experience with these guidelines in mind. For specific graduate requirements, interested students should consult the School's separate graduate program statement of requirements, available upon request.

Program Structure

The graduate curriculum is organized to give a broad view of the field of geography and its teaching, as well as a specialized approach to selected subfields. The subfields, organized in accordance with the interests and competencies of the faculty, include: cultural, environmental and resource geography, earth science and physical geography, international economies and development, urban social and economic geography, and mapping sciences. In addition, ongoing projects conducted by research groups in the School of Geography, the Center for Technology, Environment, and Development (CENTED), the program for International Development (ID), and the program of Environmental Science and Policy should be considered an integral part of the graduate curriculum; students may choose to structure their programs around such collaborative research endeavors. (See appropriate information elsewhere in this catalogue on CENTED, Environmental Science and Policy, and ID.)

The first year of graduate study (for those entering with a B.A./B.S.) is planned to broaden the student's knowledge of the field of geography and the practices within it, and to help students define their interests within the context of the Clark program. During the first year of study, students normally take two graduate core seminars: Development of Western Geographic Thought (368) and Explanation in Geography (318). The remainder of the student's coursework is selected in consultation with the graduate advisor. Toward the end of the first year, a formal review of the student's progress and discussion of future plans are conducted by a three-member, first-year advisory committee. The student should declare a formal advisor during the meeting of this committee. In order to maintain satisfactory progress in the graduate program, students must obtain a minimum of five course credits by August 1 of the entry year.

The second year of graduate study emphasizes in-depth work in the student's field of interest, formation of possible doctoral exam topics, problem formulation and research, and research skills. Coursework during this year should include seminars, directed readings, and directed research. By the end of the second year of study students are encouraged to (1) fulfill the skills requirement, (2) be preparing for the doctoral exam, and (3) begin dissertation proposal formulation. At the end of this year, students have a second-year review meeting with members of the student's Ph.D. examination committee; this meeting includes an assessment of student progress and advising for the next year of study. Fields for the doctoral examination will be discussed and agreed upon at the second-year review.

By the third year of study, students should be well on their way to completing most of the requirements of the graduate program. Coursework should deal with specific research topics and degree requirements not yet completed. The aim is to advance to Ph.D. candidacy in order to proceed with doctoral research and writing. Doctoral examinations must be taken by the end of the third year of study. These exams focus on the student's depth and breadth of knowledge in substantive subfields of geography and on knowledge of methodological and philosophical concerns relevant to the student's interests.

Each student also is required to demonstrate proficiency in two of the following areas: multivariate statistics (satisfied by taking Geog. 247), research design/research methods (satisfied by taking Geog. 314 or Geog. 310), computer programming (satisfied by taking Geog. 298, or Computer Science 101), geographic information systems (satisfied by taking Geog. 190), foreign language (satisfied by completing a second-year, second-semester college-level course), cultural-historical studies (satisfied by taking Hist. 292, or other appropriate course). Students can demonstrate proficiency in a skill by receiving a passing grade in the indicated course or by taking an examination. Students must fulfill the skills requirement by the end of the sixth semester of study or before the defense of the dissertation proposal, whichever comes first.

The doctoral exam assesses the competency of graduate students in one major and two minor fields. Competency is defined as an understanding of the substantive content and range of theoretical approaches within each subfield. Students must be able to critique alternative research traditions and defend the theoretical frameworks they adopt. For the exam in the major field the student is expected to have an in-depth knowledge of the entire field. In the field selected for the first minor, the student is expected to have mastered a survey of the field. The topic of the second minor is a more narrowly defined field, and the student will be expected to have an in-depth knowledge of the second minor. The doctoral examination committee is composed of a minimum of four faculty, at least three of whom are regular appointments of the School.

At the student's discretion, the major and/or first minor can have a written component. This is in addition to, rather than instead of, the oral examination. The question(s) for each written portion of the doctoral exam will be given to the student as a "take-home" not less than one week before the oral portion of the exam, and the student will have 24 hours to complete each of these written exams. The oral portion of the exam on the major will last approximately one and a half hours, and the oral portion of each minor exam will be about 45 minutes. Each student is required to inform the Director of the chosen exam format at least one month prior to the exam date.

Within two semesters of the completion of the doctoral exams, the student submits a proposal for doctoral research for approval by the doctoral proposal committee. The dissertation proposal committee consists of a minimum of four faculty, three of whom must be regular appointments of the School. Students who have completed all departmental requirements and have received approval of their dissertation proposal are eligible for Ph.D. Candidacy. Those who entered with a B.A. or have a M.A. in a field other than Geography may apply for a Master's degree en route to their Ph.D. At the candidacy stage students focus on dissertation research in preparation of the dissertation.

A complete draft of the thesis is defended at a working session of the dissertation committee. On approval by the dissertation committee, the final draft of the dissertation is placed on display for two weeks. At the suggestion of the dissertation committee and the director, and with the approval of the graduate student, a public presentation and dissertation signing ceremony may be scheduled.

Residence and Credit Requirements

A three-year residence and sixteen course credits beyond the B.A. degree are required for the Ph.D. program. Students entering with an M.A. in a field other than geography are expected to complete essentially the three-year residence program and at least eight course credits as determined by the School. Students entering with an M.A. in geography from another institution must complete two and one-half years of residency and eight course credits. Students must maintain satisfactory progress throughout their graduate program.

The guidelines for the Ph.D. in geography outlined here represent an overview of the program requirements. For more specific information on our graduate program, please call or write: Admissions Secretary, Graduate School of Geography, (508) 793-7337 or (508) 793-7336; Fax: (508) 793-8881.

MA IN GEOGRAPHIC INFORMATION SYSTEMS AND INTERNATIONAL DEVELOPMENT

The International Development Program and the Graduate School of Geography offer a new track within the existing ID MA degree for a specialization in Geographic Information Systems for International Development. The degree is designed as a 12-month program for early and mid-career professionals with responsibilities in mapping, environmental database development, resource management, planning, and policy implementation and monitoring. The 12-month time frame is designed to enable professionals to take a one-year leave of absence to complete the degree. The program is technically oriented with an emphasis on the development of the higher-level skills required of the practicing GIS analyst. For further information, please contact the International Development Program (508)-793-7201.

DISTINCTIVE FEATURES AND SPECIALIZATION

The main offices of the Graduate School of Geography are housed in the University's Jefferson Academic Center, complete with cartographic, earth science, and geographic information systems (GIS) laboratories. In the adjacent Geography Building, offices and work space for graduate students are provided, in addition to the Map Library, the J.K. Wright Reading Room, and the Libbey Seminar Room, which contains the personal library of Dr. Wright, regularly updated publications in the field of geography, and subscriptions to geography journals. Graduate students have their own lounge space and personal computing room.

Founded in 1921 as part of the Graduate School of Geography, the Guy H. Burnham Map and Aerial Photograph Library is an active cartographic information center. The collection, global in scope, contains 195,000 maps, as well as imagery, electronic databases, GIS and remote sensing texts, atlases, journals, globes, reference materials, and tourist information. Because of a depository agreement with the U.S. Government Printing Office, the map library houses a full array of maps published by the federal government. The library is located on the lower level of the Geography Building.

The Automated Cartography/GIS/Image Processing Lab is located on the lower level of the Geography Building. This area provides students with specialized workspace for computer-assisted cartography, GIS, and digital image processing, as well as desktop mapping. Equipment includes both large and small format digitizers, a large-format flatbed plotter, a laser printer, a color ink-jet printer, and 80386/486-based microcomputers with high-resolution SVGA color graphic displays. Other equipment, housed separately, includes a color scanner, CD-ROM reader, and a 1600/6250 bpi 9-track tape drive. Software includes leading raster and vector software and desktop graphic design applications for technical illustration and mapping.

Also available for map design and production is the Clark University Cartographic Service. Its purpose is to provide assistance in the production of information graphics for publication. A large, well-equipped graphic production darkroom features both a vacuum-frame platemaker, color proofing facilities, and a digital process camera. The cartographic service also maintains desktop mapping capabilities consisting of two Macintosh computers, a gray-scale scanner, a color Postscript printer, and a variety of graphic design software.

The Clark University geological collection and vascular plant herbarium are maintained by the School for research and teaching purposes.

PUBLICATIONS

A professional journal, *Economic Geography*, is edited by Susan Hanson and Richard Peet. Founded at Clark University in 1925, it is the only journal published in English that specializes in economic geography. The journal has a worldwide distribution and the highest "impact factor" rating among geography journals.

The graduate students maintain the Clark University Geographical Society (CUGS). The *Monadnock Newsletter* keeps School of Geography alumni in touch with each other and with news and scholarly activities of the School.

The Graduate School of Geography also publishes IDRISI, a geographic information software system developed by Ronald Eastman. The system was developed at Clark, has been adopted for use by the United Nations, and has been distributed to more than 10,000 organizations worldwide.

The professional work of some members of the department is published in the CENTED publication series, which includes an extensive reprint series.

GEOGRAPHY COURSE LISTING BY AREA OF SPECIALIZATION

NONSTREAM

011	*The World According to Geography*
110	*Computer and Quantitative Methods in Geography: Introduction*
141	*Research Methods in Geography*
247	*Computer and Quantitative Methods in Geography: Intermediate*
249	*Spatial Analysis*
290	*Capstone Seminar: Themes in Geography*
314	*Research Design, Research Methods*
318	*Explanation in Geography*
327	*Geography and Social Theory*
368	*Colloquium: The Development of Western Geographic Thought*

CULTURAL/HUMANISTIC

017	*Introduction to Cultural Geography*
105	*The Keeping of Animals: Patterns of Use and Abuse (First-year Seminar)*
108	*World Population*
116	*History of Cartography*
117	*Culture Landscape*
132	*Before and After Columbus: Ancient Middle America and the Impact of the Conquest*
137	*Time and Space in Old and New England*
139	*Country and Culture*
142	*Cities and Culture: The American City*
161	*Cultural Identities and Global Processes*
174	*Greeks and Barbarians in the Ancient Ecumene*
196	*Culture and Sport*

234	*Health and Disease in the American Habitat*
240	*The End of America: Los Angeles*
242	*Cities and Culture: The European City*
251	*Race, Migration, Gender, and Ethnicity*
253	*New England Landscape*
259	*Images, Symbol, and Myth in the American West*
276	*Cultural Ecology in the Humid Tropics*
278	*Cultural Ecology in Arid Lands*
284	*Landscapes of the Middle East*
291	*The Jonas and Susan Clark Collection*
330	*Seminar in Cultural Ecology*
342	*Seminar in Human Dimensions of Global Change: Driving Forces*
370	*Animal Agriculture*

EARTH SCIENCE AND PHYSICAL

014	*Introduction to Physical Geography*
112	*Biogeography*
114	*Intermediate Geomorphology*
115	*Hydrology*
118	*Environment & Disasters*
200	*Land Degradation*
204	*Watershed Ecology*
211	*Geomorphology of Humid Tropics*
213	*Forest Hydrology Field Methods*
216	*The Physical Environment of Arid Lands*
218	*Seminar in Physical Environment and Development*
280	*Urban Ecology: Cities as Ecosystems*
281	*Tropical Ecology*
300	*Advanced Topics in Physical Geography*
304	*Seminar on Watershed Ecology*
362	*Seminar in Geomorphology*

The following Geology courses are included in the Earth Science and Physical Geography stream:

100	*Introduction to Geology*
114	*Geomorphology*
118	*Environmental Geology*
211	*Geomorphology of Humid Tropics*
250	*Planetary Geology*
271	*Hydrogeology*
277	*Geology of Oceanic Islands*

URBAN/ECONOMIC

020	*Introduction to Urban and Regional Development*
124	*Economy and Environment*
142	*Cities and Culture: The American City*
170	*Divided Cities, Connected Lives*
175	*Urbanization in the Third World*
240	*The End of America: Los Angeles*
244	*Gender, Work and Space*
254	*Urban Transportation: Problems and Prospects*
262	*Urban Economic Geography*
273	*Seminar in Urban Geography*
280	*Urban Ecology: Cities as Ecosystems*
373	*Seminar in Urban Geography*

ENVIRONMENTAL/RESOURCE

019	*Introduction to Environmental Geography: The Global Environment*
101	*Introductory Case Studies*
124	*Economy and Environment*
136	*Gender, Space and Environment*
157	*Technology and Social Change*
176	*Environment 199_*
179	*International Political Ecology*
210	*Environment and Society*
213	*Forest Hydrology Field Methods*
224	*Critical Environmental Regions/Places*
226	*Seminar: Environmental Hazards—Theory, Models, and Applications*
228	*Management of Arid Lands*
236	*Seminar: International and Comparative Resource Policies*

237	*Feminism, Nature, and Culture*
246	*Technology Assessment*
266	*Quantitative Methods of Risk Analysis*
271	*Groundwater Hydrology and Management*
277	*Gender, Resources, and Development*
280	*Urban Ecology: Cities as Ecosystems*
281	*Tropical Ecology*
283	*Nature and Culture in the Ancient World*
310	*Research Seminar in Development Geography*
342	*Seminar in Human Dimensions of Global Change: Driving Forces*
343	*Seminar in Human Dimensions of Global Change: Responses and Management*
345	*Research Seminar in Environmental Perception*
350	*Nature, Society, and Technology*
351	*Seminar in Resource Geography: Theory and Method*
355	*Social Forestry and Development*

MAPPING SCIENCES

085	*Introduction to the Mapping Sciences*
116	*History of Cartography*
181	*Introduction to Cartography*
185	*Images of the Earth (First-year Seminar)*
189	*Remote Sensing of the Environment*
190	*Introduction to GIS*
261	*GIS Applications for Environmental Management*
274	*Seminar in Cartographic Design*
292	*Cartographic Design and Production*
294	*Problems in Cartography*
297	*GIS in Local Government*
298	*Software Design for GIS*
393	*GIS and International Development*
396	*Seminar in the Philosophy of Cartography*
397	*Advanced Topics in GIS*
	Geology
250	*Planetary Geology*

INTERNATIONAL ECONOMIES AND DEVELOPMENT

016	*Introduction to International Economies*
125	*Development Problems*
127	*Political Economy of Underdevelopment*
129	*Political Economy of Industrial Countries*
136	*Gender, Space and Environment*
179	*International Political Ecology*
228	*Management of Arid Lands*
232	*Land and Development in Latin America*
258	*Development and Regional Integration*
265	*Money, Banking, and Public Finance in Developing Countries*
268	*Anthrogeography*
272	*International Division of Labor*
277	*Gender, Resources, and Development*
289	*Advanced Development Theory*
295	*Agriculture in Third World Economies*
310	*Research Seminar in Development Geography*
338	*Seminar in Industrial Geography*
357	*Seminar: Approaches to Regional Development Planning*
360	*Development Theories and Philosophies of Change*
365	*Seminar in Social and Economic Geography*
369	*Seminar in Environment and Development*
395	*Economic Development and Policy Analysis*

COURSES

011 THE WORLD ACCORDING TO GEOGRAPHY/LECTURE, DISCUSSION

A survey of major concepts in modern geography. Emphasis is placed on the various approaches to geographic research currently conducted in the Graduate School of Geography. Physical (climatology, soils, biogeography, and landform studies), cultural, historical, economic, urban, and social themes are developed. Designed primarily for first and second year students. Staff/Offered every year

014 INTRODUCTION TO PHYSICAL GEOGRAPHY/ LECTURE, LABORATORY

A basic inquiry into the principles and components of landforms and climates. It provides critical background necessary for evaluating environmental problems. The role of human activities on physical processes is included. Staff/Offered every year

016 INTRODUCTION TO INTERNATIONAL ECONOMIES/LECTURE

Using a global systems approach, this course surveys the pre-capitalist world, outlines the historical emergence of the world capitalist system, and examines the linked processes of development and underdevelopment. It then surveys critical features of the contemporary world such as multinational corporations, Fordism, post-Fordism and changing regional systems, environmental problems, and the emergence of global consciousness. Mr. Peet/ Offered every year

017 INTRODUCTION TO CULTURAL GEOGRAPHY/LECTURE

An ecological and historical approach to the study of cultures and cultural change in a spatial context. A series of broad themes and problems are illustrated by case studies set mainly in North America. Major themes considered are adaptation to the "natural" environment; culture in prehistory; migration and the creation of cultural areas; the world views of primitive, traditional, and industrial culture; cultural landscape; and the cultural geography of the United States. One discussion section each week in addition to lectures. Mr. Johnson/Offered every year

019 INTRODUCTION TO ENVIRONMENTAL GEOGRAPHY: THE GLOBAL ENVIRONMENT/ LECTURE, DISCUSSION

Provides an overview of the physical and humanistic components of major global environmental problems—world food supplies, tropical deforestation, acid rain, ozone layer destruction, and land degradation. Students are introduced to the major biogeochemical cycles, interactions of the atmosphere and hydrosphere, and measurable trends in global ecology. Poverty, world health, population trends, and the roles of science and technology are examined as factors in, and products of, the global environment. Ms. Emel/Offered every year

020 INTRODUCTION TO URBAN AND REGIONAL DEVELOPMENT/ LECTURE, DISCUSSION

From Boston to Mexico City, New England to the Tokyo basin, the world economy is made up of a rich mosaic of cities and regions. What processes underlie the growth and development of these different urban and regional economies? Why are cities for some places of opportunity while for others landscapes of despair? Is urban-economic development as we know it sustainable? Geography 020 examines these issues and provides a survey of contemporary patterns of urban and regional development. Through comparative analysis, we examine the links between urbanization, employment, and social welfare in different political and economic contexts. Students have the opportunity to study

Worcester and the local economy as well as cities and regions around the world. The course provides an introduction to the disciplines of urban and economic geography and is especially suitable for first year and sophomore students. Mr. Angel/Offered every year

085 INTRODUCTION TO THE MAPPING SCIENCES/LECTURE

This course is designed to provide a broad introduction to the mapping sciences as they relate to the discipline of geography. It covers introductory material in cartography, geodesy, surveying, photo-interpretation, photogrammetry, remote sensing and geographical information systems. The course deals with these topics in their own right and as integral elements in the emerging subject of spatial information systems. It provides a first course suitable for both those students who wish to obtain an overview and for those who wish to take such studies further. It is suitable for first-year students and for both majors and non-majors. The course is generally non-quantitative in approach and involves some local mapping fieldwork. Mr. Steward/Offered every year

101 INTRODUCTORY CASE STUDIES/LECTURE, DISCUSSION

Refer to course description under Environmental Science and Policy 101. Staff/Offered every semester

105 KEEPING OF ANIMALS: PATTERNS OF USE AND ABUSE/FIRST YEAR SEMINAR

Animals play a prominent role in human life. Their meat, milk, hides, and hair shelter and sustain us. Pets provide companionship and solace. Animal power provides traction, transport, and recreation. Pests and predators compete with humans for food, while diseases harmful to humankind lurk unseen in animal reservoirs. Images of goodness and evil, nobility and perfidy reflect the ambivalent attitudes and cultural prejudices that govern human responses to animals. This course explores the wide variety of cultural, historical, and ecological interactions that exist between people and animals, aquatic, terrestrial, or avian. It balances utilitarian and ethical perspectives on current patterns of use and abuse in the keeping of animals. Mr. Johnson/ Offered every other year

108 WORLD POPULATION/ LECTURE

Is the population of the world growing too fast? Will overpopulation lead to doomsday? To address these questions requires an understanding of the nature of population growth and sociocultural responses to it. This course develops an understanding of this relationship through a mix of demography and population geography. World patterns of population distribution, history, and dynamics are explored, and the future of population problems is addressed. Mr. Turner, Mr. Johnson/Offered periodically

110 COMPUTER AND QUANTITATIVE METHODS IN GEOGRAPHY: INTRODUCTION/LECTURE

An introduction to geographic analysis and the role of the computer in assisting this process. The course considers data sampling and descriptive and inferential statistical techniques for analyzing geographic data. Topics include graphic techniques, tests of hypotheses, simple regression, and the analysis of variance. As an integral part of the course, students learn to use computer programs for statistical analysis. Although no prior exposure to computers or statistics is assumed, the course is suitable for students of all levels and is one for which graduate students may receive credit. Meets skills requirement for geography majors. Mr. Karaska/Offered every year

112 BIOGEOGRAPHY/LECTURE

Past and present geographical distributions of plant and animal species are considered in relation to biological evolution, species interactions, dispersal strategies, plate tectonics, climatic change, and human activity. Island biogeography and the biogeography of tropical vascular plants are emphasized. Mr. Herwitz/Offered every year

114 INTERMEDIATE GEOMORPHOLOGY/LECTURE

The history of plate tectonics is explored in relation to the uplift of mountains, tectonics, and volcanism. The gradual wearing down of the earth's surface by hydrological processes is emphasized in the latter part of the course. Prerequisite: Geography 014, Geology 100, or permission of instructor. Mr. Lewis/Offered every year

115 HYDROLOGY/LECTURE

Provides an overview of the hydrologic cycle and its major components including precipitation, evapotranspiration, soil moisture, surface water runoff, and groundwater flow. The course focuses upon the role of water as a unifying concept in environmental science. Examines human modification of natural hydrologic regimes. Prerequisite: Geography 014 preferred but not required. Ms. Emel/Offered every other year

116 HISTORY OF CARTOGRAPHY/LECTURE

A basic survey of the history of mapping until about 1900. Topics include the methodological basis of investigations into the subject; maps of primitive peoples; the classical, medieval, and Renaissance periods; the rise of national surveys; the relationship of mapping to exploration; and the cartography of North America. Mr. Steward/Offered every year

117 CULTURE LANDSCAPE/LECTURE

Examines the processes and values that shape the human environment. The fundamental premise is that every culture leaves a record of its presence in its material landscape, and that this landscape record can be understood and "read" by the informed observer. Because landscape is a product of culture as well as of nature, it can best be understood using both an insider's (native's) and outsider's perspective. Insights are gained by comparing familiar landscapes with those produced by other cultures. For this reason, the course studies selected Middle Eastern, Indian, Chinese, and European landscapes in addition to the regional landscapes of Northern America. Artistic, literary, historical, and ecological perspectives are brought to bear on the interpretation of ordinary and elite landscapes of fact and symbol. Mr. Johnson/Offered every other year

118 ENVIRONMENT AND DISASTERS/LECTURE

Examination of the basic concepts and processes within the earth sciences, relative to the evaluation of risks and decisions on future policies of land use and resource utilization.

The emphasis is on aspects of the environment of particular interest to geographers, geologists, and planners. Prerequisite: Geography 014, Geology 100, or permission of instructor. Staff/Offered every other year

124 ECONOMY AND ENVIRONMENT/LECTURE, DISCUSSION

This course addresses the historic intersection of industrialization, urbanization, and ecology. We examine cases of economic, environmental, and political conflict over the past 300 years in order to gain historic depth on contemporary issues. London air pollution, New York City water supplies, mechanized fishing in the Pacific, European coal mining, and American forestry product industries will be among the cases we consider. The course objective is to help students envision the relationships between the environment and work, technology, consumption, finance, and other economic activities. Legal and political histories pertinent to these relations are also addressed. Ms. Emel/Offered every other year

125 DEVELOPMENT PROBLEMS/LECTURE, DISCUSSION

Refer to course description under International Development 125. Ms. Thomas-Slayter/Offered every year

127 POLITICAL ECONOMY OF UNDERDEVELOPMENT/LECTURE

This course critically surveys the leading theories of development (environmental determinism, modernization theory, dependency/world systems theory, Marxist theories, postmodern analytics) with emphasis on their philosophical and social-theoretical origins. Mr. Peet/Offered every year

129 POLITICAL ECONOMY OF INDUSTRIAL COUNTRIES/LECTURE

The advanced capitalist countries are undergoing rapid economic change including an industrial devolution as remarkable as the industrial revolution of the nineteenth century. This course examines the effects of economic change in the United States, Western Europe, Japan, East Asia, and Latin America in the context of theories of global development. Economic and social problems, such as the destruction of employment, unemployment, and regional and community collapse, are emphasized. The course also examines the contradictions of regional economic advance in high technology regions. A survey of regional development policy brings the course to a pragmatic conclusion. Mr. Peet/Offered every other year

132 BEFORE AND AFTER COLUMBUS: ANCIENT MIDDLE AMERICA AND THE IMPACT OF THE CONQUEST/LECTURE

For at least 2,500 years before Columbus reached the Americas, Middle America witnessed the rise and fall of several advanced cultures. These cultures adapted to different environmental zones through creative land use practices that sustained very large populations. The impact of Cortez's penetration of Mexico, however, was devastating. Empires were destroyed, massive depopulation ensued, land use practices were radically altered, and a new political and economic order was instituted. This course explores the pre- and immediate post-Columbus circumstances in Middle America from a cultural and human ecological perspective. Mr. Turner/Offered periodically

136 GENDER, SPACE, AND ENVIRONMENT/LECTURE, DISCUSSION

Students will explore how gender is reflected in the landscape, in our settlement and land use patterns, in environmental history, and in our present ecological science and practice from the global to the local level. The class will combine lectures, readings, discussions, films, and local field trips. We will review feminist and other alternative explanations of the gendered nature of knowledge, access, use and control of space and resources in a variety of environments—past, present, and possible. Regional focus on New England. Ms. Rocheleau/Offered every year

137 TIME AND SPACE IN OLD AND NEW ENGLAND/LECTURE

Uses cases from old and New England to demonstrate the skills, methods, and sources of cultural, historical, and humanistic geography in the towns and fields of New England and in texts of both Englands. Dating techniques; prehistoric chronology; estimating past populations; toponymy, linguistic, and lexical evidence; archaeology and the ground itself; archival and literary evidence; aerial photography; vernacular and high-style architecture. Skills course for geography majors in cultural stream. Mr. Bowden, Staff/Offered every other year

139 COUNTRY AND CULTURE/LECTURE

The landscape can be read! Be it a vast tropical rainforest with an occasional clearing or an intensively cultivated river valley in New England, the rural landscape is the product of interaction between place (environment) and people (culture). This course traces the evolution of rural landscapes through time from early hunter-gatherers to modern suburban encroachment on rural areas. Emphasis is placed on ecological principles that help explain the technocultural modification of rural places. Mr. Johnson/Offered every other year

141 RESEARCH METHODS IN GEOGRAPHY/LECTURE, DISCUSSION

Focuses on the ways in which social science research is conducted and emphasizes primarily applied research in a problem-solving context. Involves the students in the variety of problems, methodological strategies, and analytical techniques characteristic of current geographical research. Topics include defining a research problem, measurement, sampling, questionnaire design, and modeling. Mr. Mitchell/Offered every year

142 CITIES AND CULTURE: THE AMERICAN CITY/LECTURE AND FIELD TRIP

The course focuses on the development of distinct subcultures in America and on the cultural capitals of the country. Emphasis is on the expression of culture in space and on the agents of cultural change and stability. Detailed studies of cities that have at one time been cultural capitals in America—Boston, Philadelphia, New York City, Chicago, San Francisco, and Los Angeles—consider the origins and effects of this role on each city's structure. The same process is studied in distinctive regional cultural capitals—Charleston, Newport, Salt Lake City, Santa Fe, and New Orleans. Mr. Bowden/Offered every year

157 TECHNOLOGY AND SOCIAL CHANGE/LECTURE

This course focuses on the interaction between technology and society. Among the topics considered are: the nature of technology and its relationship to society, historical and contemporary case studies of the impact of technology, the nature of technological failures, and forecasts of how technology may change society by the year 2000. Mr. Mitchell/Offered every year

161 CULTURAL IDENTITIES AND GLOBAL PROCESSES

Refer to course description under Cultural Identity and Global Processes 161. Ms. Bhachu/Offered every year

170 DIVIDED CITIES, CONNECTED LIVES/LECTURE, DISCUSSION

We examine the spatial patterns of social groups in American cities and consider how these patterns are maintained or change over time. What are the implications of these patterns for the functioning of cities, for the provision of social services, and for social change? What is the role of space in dividing and uniting different cultural groups? These are some of the questions we consider. Ms. Hanson/Offered every other year

174 GREEKS AND BARBARIANS IN THE ANCIENT ECUMENE/ LECTURE, DISCUSSION

The ancient Greeks left a diverse descriptive and cartographic record of exploration and discovery. We will follow their footsteps in text, map, and photographic imagery as they encounter the "barbarian" world, and with the aid of these tools as well as modern archaeological data, we will gradually reconstruct the ancient ecumene in its physical and cultural diversity. A historical perspectives course; freshmen and sophomores only. Mr. Koelsch/Offered every other year

175 URBANIZATION IN THE THIRD WORLD/LECTURE, DISCUSSION

This course examines contemporary processes of urbanization in the Third World. Issues addressed include primate cities, the links between urban and rural economies, and the internal structure of cities. Particular attention is paid to problems of Third World urbanization and emerging policy responses. Prerequisite: Geography 020 or permission. Mr. Karaska/Offered every other year

176 ENVIRONMENT 199_/ LECTURE, DISCUSSION

An assessment of major environmental issues, particularly those global in nature, confronting human society in the current year. Attention to problems requiring human intervention: rapid population growth, consumption values, global poverty, ozone depletion, and hazardous waste disposal. The interplay between environmental change and public policy is stressed. Intended for those desiring introductory or general knowledge. Mr. Kasperson/Offered every year

179 INTERNATIONAL POLITICAL ECOLOGY/LECTURE, DISCUSSION

Integrates issues of ecology and political economy from local to global scale case studies, starting from a close-up view of people in environmental "hot spots" and following their linkages into the world economy and planetary ecosystems. Students explore the connections between international environmental, and economic policy and the everyday realities and possible ecological futures of people in environments ranging from the Amazon rainforest to the streets of Worcester, Massachusetts. Offered as a first year seminar and as a lecture course alternate years. Ms. Rocheleau/Offered every year

181 INTRODUCTION TO CARTOGRAPHY/LECTURE, LABORATORY

An introduction to the fundamental principles underlying the graphic representation and geographic description of earth phenomena. The examination ranges from concepts of space and spatial representation to descriptive techniques and the perceptual basis for graphic communication. Mr. Steward, Mr. Eastman/Offered every year

185 IMAGES OF THE EARTH/ FIRST-YEAR SEMINAR

This course, open to first-year students only, provides an introduction to the images and graphic forms derived from remote sensing and cartography. It brings together the concerns of map-making, aerial photography, satellite imagery, surveying, and computer science to give us new ways of representing, analyzing, and understanding our planetary environment. Mr. Steward/Offered periodically

189 REMOTE SENSING OF THE ENVIRONMENT/LECTURE, LABORATORY

Offers a broad introduction to one of the most powerful tools now being developed for surveying geographical phenomena. Covers the use of remotely sensed data, such as air photos and a variety of satellite imagery, to provide answers to many of the problems related to our physical and human environment. Mr. Steward/Offered every year

190 INTRODUCTION TO GIS/LECTURE, LABORATORY

A broad introduction to Geographic Information Systems and associated techniques in Digital Image Processing. Lectures stress the fundamental logic and scope of problem solving using each of the two main types of systems: raster and vector. Laboratory exercises and demonstrations allow students to become familiar with the two predominant microcomputer systems in use today—IDRISI (devloped at Clark) and Arc/Info. Although the course is computer-oriented, no programming is involved. Graduate students may receive credit for this course.Staff/Offered every year

196 CULTURE AND SPORT/LECTURE, DISCUSSION

Readings in humanities "texts," meetings focused on film, and frameworks from the social sciences are used to explore a number of American games/sports (and their social English progenitors) as expressions of American history, character, values, environment, self-image, mentality, economic ethos, and institutions. Themes are: (1) the relation between the character and structure of the games and their success among different groups of Americans; (2) the timing of adoption of the games; (3) explanations for the transformation of the games from British and early forms; and (4) deviation of professional and amateur variants. Athletics, boxing, cricket, baseball, soccer, rugby, football, basketball, hockey, and tennis, among others, are considered. Classes meet weekly. The class period is extended occasionally for special events (e.g. films). Mr. Bowden/Offered every other year

200 LAND DEGRADATION/ SEMINAR

Resource use has often resulted in the degradation of aquatic and terrestrial productivity. The roles of agricultural deforestation and industrialization on the land degradation problem are examined both in a contemporary and a historical framework. Mr. Lewis/ Offered every other year

204 WATERSHED ECOLOGY/ SEMINAR

An advanced seminar that examines the current scientific literature on the functional ecology and biogeochemistry of contrasting terrestrial ecosystems. Topics covered include the inputs, outputs, and internal transfers of water and nutrients in temperate hardwood forests, pine barrens, tropical rainforests, montane cloud forests, eucalypt woodlands, and arid environments. The processes of rock weathering, leaching from above-ground vegetative surfaces, nutrient uptake by plants, atmospheric inputs, and stream discharge of nutrients are emphasized. The Hubbard Brook ecosystem study is considered in detail with a field trip to the Hubbard Brook experimental watershed in the White Mountains. Mr. Herwitz/Offered every other year

210 ENVIRONMENT AND SOCIETY/LECTURE, DISCUSSION

A central theme of this course is to analyze the relationship between human societies, especially those that are industrialized, and the natural environment. Among the topics to be considered are the impact of industrialization on nature, the population-resource debate, the rise of modern environmental concern and political action, pesticides, and energy policy issues. Mr. Mitchell/Offered every year

211 GEOMORPHOLOGY OF HUMID TROPICS/LECTURE, DISCUSSION

The humid tropics—home of the rainforest, dry forest, and savanna—are areas of special interest to physical geographers. Deep weathering of rocks, rapid soil erosion when the forest or grasses are removed, great rivers in the tropics, and the devastating impact of human intervention are among the topics explored. Prerequisite: Geography 114, or permission of instructor. Mr. Lewis/Offered every other year

213 FOREST HYDROLOGY FIELD METHODS/RESEARCH, DISCUSSION

Students have an opportunity to conduct field research and gain experience acquiring hydrological data on evapotranspirational losses from local pine plantations and broadleaved deciduous forests. Field and laboratory research leads to the preparation of a formal article that conforms to the specifications of a scientific journal. The objective of the research is to evaluate how different vegetation types affect water resources. Prerequisite: permission of instructor. Meets skills requirement for geography majors. Mr. Herwitz/ Offered every other year

216 THE PHYSICAL ENVIRONMENT OF ARID LANDS/LECTURE, DISCUSSION

Presents an analysis of the processes acting on landscapes and the atmospheric environment of arid areas. The focus is on climate and related geomorphic processes. The course emphasizes the arid Southwest of the United States and the African Sahel. Prerequisite: Geography 014, Geology 100, or permission of instructor. Mr. Lewis/Offered periodically

218 SEMINAR IN PHYSICAL ENVIRONMENT AND DEVELOPMENT/SEMINAR

The world is changing more rapidly than at any time in history. This course reviews the patterns of change in the Third World, examines the role of environment and resource management in development, and allows students to develop their own in-depth case studies. Permission of instructor required. Mr. Lewis/Offered every other year

224 CRITICAL ENVIRONMENTAL REGIONS/PLACES/SEMINAR

Examines a number of the world's most environmentally threatened regions and places, such as the Sahel, Amazonia, the Aral Sea, Mexico City, and the Mediterranean Sea. Each case will also explore some specific theme in human driving forces of environmental change and societal response. Broader theoretical approaches, such as political ecology and environmental risk analysis, will be examined in some detail. Open to graduate students, undergraduate seniors with at least one course in environmental geography, and juniors by permission of the instructor. Mr. Kasperson/Offered periodically

226 SEMINAR: ENVIRONMENTAL HAZARDS—THEORY, MODELS AND APPLICATIONS/LECTURE, DISCUSSION

A seminar for advanced students on the theory and methods of hazard assessment and social response. The course covers natural, technological, and global hazards and includes such topics as human vulnerability, disasters, risk perception, social amplification of risk, social learning, and corporate management of risk. Mr. Kasperson/Offered every other year

228 MANAGEMENT OF ARID LANDS/LECTURE, SEMINAR

The drylands of the world present special development problems. Peculiarly prone to degradation, these regions face the difficult task of providing support to a rapidly growing population. Viewed in a historical perspective, the demography, behavioral characteristics, social and livelihood systems, and physical constraints of dryland ecosystems are analyzed. Special attention is paid to evaluating the management strategies currently employed in their use, identifying the obstacles constraining their growth, and assessing their future development potential. Mr. Johnson/Offered every other year

232 LAND AND DEVELOPMENT IN LATIN AMERICA/LECTURE, DISCUSSION

Refer to course description under International Development 234. Staff/Offered every year

234 HEALTH AND DISEASE IN THE AMERICAN HABITAT/LECTURE, DISCUSSION

A synoptic view of concepts and practices concerning health and disease, based on readings drawn from medical and historical geography, biological science, and the history of American medicine and public health. Emphasis on societal interactions with disease environments during the last hundred years and their intellectual consequences. Not open to first-year students. Mr. Koelsch/Offered every other year

236 SEMINAR: INTERNATIONAL AND COMPARATIVE RESOURCE POLICIES/LECTURE, SEMINAR

Deals with international and comparative law/policy of water resources, fisheries, land, oceans and seas, wildlife, air, and nuclear power. Within the context of each of these topical areas, the course objectives are to define the "resource problem(s);" analyze existing institutions (i.e., property rights, management systems, and allocation regimes) and their responses to the problems, and consider conceptual guidelines for improving institutional arrangements and individual actions. Ms. Emel/Offered every other year

237 FEMINISM, NATURE AND CULTURE/SEMINAR

Provides an in-depth study of feminist theories of science, rationality, and morality—particularly as they apply to nature-society relations. The cultural politics of "nature" across time and space are examined as well. Film, literature, government reports, and academic writing are used to show how images and "truths" about nature and society are constructed. Ms. Emel, Ms. Rocheleau/Offered every year

240 THE END OF AMERICA: LOS ANGELES/LECTURE, DISCUSSION

The modern city reflects the values and forces that have shaped Western culture in its westward course. In the last century the history of Los Angeles—the western end of American space—embodies better than that of any other city the polemic between traditional and technological notions of the modern city. It provides a unique, possibly the ultimate, model for the examination of the American cultural spirit, perhaps even of the end of that spirit. This course is designed to explore the changing notions of the city and the American attitude toward the culture of cities through close examination of the history, geography, literature, and film associated with Los Angeles. Mr. Bowden/Offered every other year

242 CITIES AND CULTURE: THE EUROPEAN CITY/LECTURE

Examines the city as a center of cultural stability and cultural change as reflected in urban form. Particular focus upon the notion of creativity in the city. Case studies include London, Edinburgh, Paris, Vienna, and Manchester. Mr. Bowden/Offered every other year

244 GENDER, WORK, AND SPACE/SEMINAR

How do gender, race, class, and ethnicity propel certain types of people into certain types of work? What role do location and space play in shaping and sustaining such divisions within the labor force? How have people explained the fact that women, youths, and minorities hold jobs in the paid work force that are distinctly different from the jobs held by other workers? How can we evaluate the validity of these competing explanations? How can a geographic understanding of gender, class, and ethnicity help explain the current restructuring of the global economy? How effective have women been (or can they be) in organizing to improve their economic and social status? These are among the questions we tackle; the course materials focus on urban, industrialized settings from the local to the global scale. Ms. Hanson/Offered every other year

246 TECHNOLOGY ASSESSMENT/SEMINAR

Refer to course description under Environmental Science and Policy 250. Mr. Ratick/Offered every year

247 COMPUTER AND QUANTITATIVE METHODS IN GEOGRAPHY: INTERMEDIATE/LECTURE, LABORATORY

This course continues the development, begun in Geography 110, of the use of computer-based methods in geographical analysis. The course focuses on: bivariate and multivariate regression, discriminant analysis, factor analysis, log-linear models, and analysis of spatial and temporal data. The labs associated with the course are designed to reinforce concepts developed in the lectures, and to familiarize students with the development and manipulation of data bases. In the labs students use both PCs and the Vax mainframe computer, and work with a spreadsheet and the SPSS-X statistical software package. Prerequisite: Geography 110. Meets skills requirement for geography majors and graduate students. Mr. Ratick/Offered every year

249 SPATIAL ANALYSIS/LECTURE

The fundamental purpose of spatial analysis is to describe, evaluate, and predict the patterns of physical and social relations between and among places. This course will provide a systematic development of the theories and methods used for spatial analysis with specific emphasis on those most applicable to decision making. Topical areas for potential application of these techniques include environmental assessment, transportation analysis, and resource management. The ways in which these methods can be used with geographical information systems will be developed. Mr. Ratick/Offered every other year

251 RACE, MIGRATION, GENDER, AND ETHNICITY

Refer to course description under Cultural Identity and Global Processes 271. Ms. Bhachu/Offered every other year

253 NEW ENGLAND LANDSCAPE/SEMINAR, FIELD TRIPS

The course is introduced by an examination of the idea of landscape within the geographic endeavor, followed by a history of landscape studies in New England. Substantive field and library work focuses on houses and buildings, fences, walls, land use, and settlement patterns as they hang together to give character and distinctiveness—first, to the nine subcultural regions of coastal and valley New England settled in the "First Period" (to 1725); and second, to the areas of upland New England where the Yankee "folk-housing landscape" solution covered the land in the eighteenth century. An assessment of the landscape impact of commercial villages and greens and of the mills and mill villages, created 1790-1852, completes the course. Five half-day field trips to the Central Uplands, Rhode Island, the North Shore, and to the Connecticut Valley. Three full-day field trips on Saturdays. Mr. Bowden/Offered every other year

254 URBAN TRANSPORTATION: PROBLEMS AND PROSPECTS/ LECTURE, DISCUSSION

What are the dimensions of the urban transportation problem? How can we analyze the problem so as to propose policies that might help to solve it? Topics include transportation and land use, transportation and energy, the car vs. public transit, and transportation and equity issues. We examine aggregate and disaggregate approaches to analyzing patterns of spatial behavior and evaluate the relative effectiveness of these approaches in posing solutions to urban transportation problems. Ms. Hanson/Offered periodically

258 DEVELOPMENT AND REGIONAL INTEGRATION/SEMINAR

Refer to course description under International Development 258. Ms. Seidman/Offered periodically

259 IMAGES, SYMBOL, AND MYTH IN THE AMERICAN WEST/LECTURE, DISCUSSION

From the first, Americans made the West what they wanted it to be: Garden of the World, Passage to India, Great American Desert, Great Prairie, or Garden in the Grassland. A westering people invested this land with heroes, hunters, horse-riding Indians, trappers, scouts, cowboys, oil magnates, land boomers, and movie tycoons. The West presents a kaleidoscope of images of both outsiders and insiders, and this course considers the origins and changes in these images, their effects on behavior, and their imprint on the land. Emphasis throughout is on the methods and skills of those concerned with reconstructing the geographical knowledge (geosophy) of people of different backgrounds, roles, regions, and times. Mr. Bowden/Offered every other year

261 GIS APPLICATIONS FOR ENVIRONMENTAL MANAGEMENT/SEMINAR

Refer to course description under International Development 261. Staff/ Offered every year

262 URBAN ECONOMIC GEOGRAPHY/SEMINAR

The past two decades have witnessed dramatic changes in the American urban system and in the internal structure of cities. At the same time, this has been a period of particular vitality in the development of theory, new perspectives, and alternative discourse about the city and the contemporary urban experience. Geography 262 examines these recent developments in urban geography and lays out in some detail a political economy of urbanization in advanced capitalist societies. Mr. Angel/Offered every other year

265 MONEY, BANKING, AND PUBLIC FINANCE IN DEVELOPING COUNTRIES/SEMINAR

Refer to course description under International Development 265. Ms. Seidman/Offered periodically

266 QUANTITATIVE METHODS IN RISK ANALYSIS/SEMINAR

Refer to course description under Environmental Science and Policy 265. Ms. Brown/Offered every year

268 ANTHROGEOGRAPHY/ SEMINAR

For students with a background in anthropology and geography, this course looks at contemporary theoretical problems, such as the influence of postmodern theory on ethnography or questions of semiotics and iconography. Mr. Peet/Offered every other year

271 GROUNDWATER HYDROLOGY AND MANAGEMENT/LECTURE, DISCUSSION

An introduction to both the geological and hydrological factors controlling the occurrence and development of groundwater and the methods and impacts of groundwater management. Ms. Emel/Offered every other year

272 INTERNATIONAL DIVISION OF LABOR/SEMINAR

Refer to course description under International Development 272. Ms. Seidman/Offered periodically

273 SEMINAR IN URBAN GEOGRAPHY/SEMINAR

Through readings and discussion, this seminar focuses on major research problems in urban geography. Prerequisites: Geography 170 or 262, or permission. Ms. Hanson, Mr. Angel/ Offered every other year

274 SEMINAR IN CARTOGRAPHIC DESIGN/SEMINAR

Explores the common ground between graphic design/fine arts and cartography/geography in the area of map design. Draws upon a variety of approaches and methodologies, seeking points of consensus and clarity that can aid in both the understanding and making of maps. Capitalizes on the different skills and interests of the professors involved and brings students into an active seminar exchange. Aspects covered include typography, color, psychophysical and cognitive approaches, aesthetics, communication and design theory, and the ideas of metacartography. Fulfills a skills requirement for geography majors. Mr. Steward/Offered periodically

276 CULTURAL ECOLOGY IN THE HUMID TROPICS/ LECTURE, SEMINAR

A mystique exists about the humid tropics. Mid-latitude biases have led to inaccurate assessments of the composition of these wet, hot lands; of traditional uses of them; and of their suitability, both past and present, to support large populations and high living standards. These issues are examined by focusing on the range of environments and livelihood strategies that have existed or could exist in this region. Mr. Turner, Ms. Rocheleau/ Offered periodically

277 GENDER, RESOURCES, AND DEVELOPMENT/SEMINAR

Considers the gender division of control, responsibility, knowledge, labor, and benefits in the definition, use, management and protection of natural resources in developing countries. Readings, lectures, and discussion focus on the distinct perspectives and concerns of women and men as actors in natural resource use and management and in local, regional, and global ecological transformations. Ms. Rocheleau/Offered every year

278 CULTURAL ECOLOGY IN ARID LANDS/LECTURE, DISCUSSION

Drylands are risky and often inhospitable places in which to live. Yet people choose to occupy such places and to wrest a living from sparse and scattered resources. Those farmers, herders, hunters, and urban dwellers who are successful have coping strategies for dealing with drought, desertification, and environmental change. Comparison of these strategies in both developing and industrialized societies identifies obstacles to and opportunities for successful management of drylands in support of a growing population. Mr. Johnson/ Offered periodically

280 URBAN ECOLOGY: CITIES AS ECOSYSTEMS/LECTURE, DISCUSSION

Students will explore the ecology and physical geography of cities as systems built, inhabited, and "managed" by people. This special class of ecosystem is often neglected except in very specialized studies of pollution, yet it is home to many of the world's people and to a surprising number of plant and animal species as well. Readings, lectures, discussion, and written work will combine landscape and systems ecology with physical and urban geography to broaden our understanding of city environments, both present and possible. Ms. Rocheleau/Offered periodically

281 TROPICAL ECOLOGY/ LECTURE, DISCUSSION

Examines the structure and function of several major tropical ecosystems (rainforests, savannas, wetlands, coastal zones, deserts) from the perspective of systems ecology. Readings, lectures, and discussions focus on energy flows, material cycles, and species diversity and distribution. The class also explores the stability and productivity of tropical ecosystems (especially forests and savannas) under conditions of stress and their responses to widespread clearing and land use change. Ms. Rocheleau/Offered every year

283 NATURE AND CULTURE IN THE ANCIENT WORLD/DISCUSSION

Selected problems of nature-society relationships in the Greco-Roman world in the light of modern environmental and social science. Prerequisite: six hours of classics or of geography, or permission of instructor. Mr. Koelsch/ Offered every other year

284 LANDSCAPES OF THE MIDDLE EAST/LECTURE, SEMINAR

A diverse array of landscapes, economies, and cultures comprise the Middle Eastern culture realm. The modernization and transformation of the traditional Islamic and non-Islamic patterns of life and livelihood in the Middle Eastern cultural mosaic are the focus of this course. Literature and ethnographic description supplement geographic analysis. Mr. Johnson/Offered every other year

289 ADVANCED DEVELOPMENT THEORY/SEMINAR

This course assumes considerable background in development theory. It surveys recent changes in developmental thinking at an advanced level, focusing on the influence of postmodern social theory. Mr. Peet/Offered every year

290 CAPSTONE SEMINAR: THEMES IN GEOGRAPHY/SEMINAR

A requirement for all geography majors, the capstone seminar brings together a range of contemporary themes in geographic research. Each year the seminar focuses on a local area, in which students carry out research projects. The course is restricted to geography majors in their senior year. Ms. Hanson/Offered every year

291 THE JONAS AND SUSAN CLARK COLLECTION/SEMINAR

Refer to course description under Art History 250. Ms. Grad/Offered every other year

292 CARTOGRAPHIC DESIGN AND PRODUCTION/LECTURE, LABORATORY

A course concerned with the design and production of full-color printed maps. The principles and procedures of offset lithographic printing, photomechanical production (e.g. scribing), phototypesetting, process photography, process color and nonprinting reprographic techniques are discussed. In the laboratory sections, students compile, design, and produce a full-color map to a color proof stage. Prerequisite: Geography 181 or permission of instructor. Mr. Eastman/Offered every other year

294 PROBLEMS IN CARTOGRAPHY/SEMINAR

An examination of perennial and new problems in cartography ranging from considerations of a philosophical and historical nature to the practical concerns of contemporary mapping. Prerequisite: permission of instructor. Mr. Steward, Mr. Eastman/Offered periodically

295 AGRICULTURE IN THIRD WORLD ECONOMIES/SEMINAR

Consumption and commodity agriculture in the non-Western world is explored. Emphasis is placed on the economic behavior and livelihood strategies employed in these economies and on theories of agricultural change. Mr. Turner/Offered periodically

297 GIS IN LOCAL GOVERNMENT/ SEMINAR, PROJECT

A project course which explores the issues and procedures involved in the application of GIS to local government planning. A central component of the course is the development of a hands-on familiarity with the Arc/Info vector-based system, and its application in database development (data conversion), routine data management and planning activities. Students also learn the procedures involved in land use/land cover mapping using remotely sensed data and a raster GIS (IDRISI). Procedures covered include image classification, ground truth procedures using Global Positioning Systems (GPS), accuracy assessment, and the integration of those data with the vector data base. Map and image data for a local community are used in the case study. Prerequisite: Geography 190. Staff/Offered every year

298 SOFTWARE DESIGN FOR GIS/LECTURE

A hands-on introduction to the representation, analysis and display of geographic data in digital computers. Programming is introduced as an integral part of the course, and serves as the vehicle for an exploration of raster and vector data structures, graphic display procedures and the algorithmic basis spatial data processing in GIS and Automated Cartography. No prior background in computer programming is required. Prerequisite: Geography 181 or 190 or permission of the instructor. Mr. Eastman/Offered periodically

300 ADVANCED TOPICS IN PHYSICAL GEOGRAPHY/SEMINAR

Theories and concepts in specific areas of physical geography are examined at an advanced graduate level in the context of a research seminar. Specific topics are focused on research interests of the faculty and students taking the course. Prerequisite: permission of instructor. Mr. Lewis/Offered periodically

304 SEMINAR ON WATERSHED ECOLOGY/SEMINAR

An advanced seminar that examines the current scientific literature on the functional ecology and biogeochemistry of contrasting terrestrial ecosystems. Topics covered include the inputs, outputs, and internal transfers of water and nutrients in temperate hardwood forests, pine barrens, tropical rainforests, montane cloud forests, eucalypt woodlands, and arid environments. The processes of rock weathering, leaching from above-ground vegetative surfaces, nutrient uptake by plants, atmospheric inputs, and stream discharge of nutrients are emphasized. The Hubbard Brook ecosystem study is considered in detail with a field trip to the Hubbard Brook experimental watershed in the White Mountains. Mr. Herwitz/Offered every other year

310 RESEARCH SEMINAR IN DEVELOPMENT GEOGRAPHY/SEMINAR

Designed for thesis- and dissertation-level students working in the areas of resources, development, ethno-ecology, social theory, and political economy in developing countries, who are developing proposals or pre-proposal research papers. The seminar provides a forum for discussion, criticism, and practical advice. Places strong emphasis on ethnographic approaches and qualitative field methods. Prerequisite: Geography 314 or permission of instructor. Meets graduate skills requirement in Geography and International Development. Ms. Rocheleau/Offered every other year

314 RESEARCH DESIGN, RESEARCH METHODS/SEMINAR

Covers all the major topics in research design and methodology: e.g., problem definition, research strategies, measurement, sampling, and data collection techniques and procedures. Mr. Mitchell/Offered every year

318 EXPLANATION IN GEOGRAPHY/SEMINAR

Varying views of explanation, including positivist, realist, and conventionalist, are explored. Particular attention is given to the tensions between structural and nonstructural explanation and the integration of theory and empirical facts. Meets first-year core course requirement for geography graduate students. Mr. Angel/Offered every year

327 GEOGRAPHY AND SOCIAL THEORY/SEMINAR

Explores major themes in contemporary social theory as they relate to geographical studies. Emphasis is placed on Marxism, structuralism, feminism and postmodern social theory. Mr. Angel, Mr. Peet/Offered every other year

330 SEMINAR IN CULTURAL ECOLOGY/SEMINAR

The "ecological transition," the increasing incorporation of nature into human culture, is the point of departure for an examination of the theory, method, and policy relevance of cultural ecology. Prerequisite: Geography 278 or equivalent. Mr. Johnson, Mr. Turner/Offered periodically

338 SEMINAR IN INDUSTRIAL GEOGRAPHY/SEMINAR

Surveys recent trends in industrial geographic theory in response to the internationalization of capital and the rapidly changing futures of old industrial regions. Mr. Peet/Offered periodically

342 SEMINAR IN HUMAN DIMENSIONS OF GLOBAL CHANGE: DRIVING FORCES/SEMINAR

Human-induced global environmental change has reached unprecedented magnitudes and now includes direct impacts on the biogeochemical flows that sustain the biosphere. Social science understanding of the human dimensions of this scale and kind of change is poorly developed, and the research agenda to address is still emerging. This seminar explores the role of humankind as the driving force or source of global change. Emphasis is placed on the development of a framework that helps to identify these forces and to understand their role by situation (local/regional variability) and by spatial scale. Mr. Turner/Offered periodically

343 SEMINAR IN HUMAN DIMENSIONS OF GLOBAL CHANGE: SOCIETAL RESPONSES/SEMINAR

This course explores societal responses to and management of global environmental change. Major topics to be addressed are: societal response pools, adaptation vs. adjustment, surprise, vulnerability analysis, policy analysis, social learning, and regime theory. Mr. Kasperson/Offered every other year

345 RESEARCH SEMINAR IN ENVIRONMENTAL PERCEPTION/SEMINAR

Examines theories and major research on the human perception of the natural and social environment and the relationship between perception and behavior. Attention will be given to the relevant methodologies. Part of the semester will be devoted to students' research interests. Mr. Mitchell/Offered periodically

350 NATURE, SOCIETY, AND TECHNOLOGY/SEMINAR

Examines theories and major research findings on the relationship between human societies and the natural environment. Mr. Mitchell/Offered every other year

351 SEMINAR IN RESOURCE GEOGRAPHY: THEORY AND METHOD/SEMINAR

Examination of major theories and methods of resource estimation, allocation, and management, providing coverage of the scholarly literature of the field. Ms. Emel/Offered every other year

355 SOCIAL FORESTRY AND DEVELOPMENT/SEMINAR

Considers the importance of trees and forests to the social and ecological well-being of people, with an emphasis on the interests of rural people in Africa, Asia, and Latin America. The class examines forest resources as a growing focus of political and economic action at local, national, and international levels during the coming decade. After a broad review of the field, students concentrate on case study examples of technical and policy innovations in social forestry and agroforestry. Ms. Rocheleau/Offered every other year

357 SEMINAR: APPROACHES TO REGIONAL DEVELOPMENT PLANNING/SEMINAR

This graduate seminar is intended to provide an understanding of the issues encountered in development intervention: issues of growth and equity, of sectoral emphasis, of spatial distribution, and of relations between classes, regions, states, and natural resources. Through a review of the literature on development economics, political economy, growth models, spatial analysis, modernization theories, and rural-urban dynamics, this course focuses on concepts of the region as the unit for development planning and intervention. Mr. Karaska/Offered every year

360 DEVELOPMENT THEORIES AND PHILOSOPHIES OF CHANGE/SEMINAR

Refer to course description under International Development 360. Ms. Seidman, Staff/Offered every year

362 SEMINAR IN GEOMORPHOLOGY/SEMINAR

Explores patterns of thought in modern geomorphology focusing particularly on fluvial and mass wasting processes acting directly on hill slopes, and lands affected by human activities. Staff/Offered periodically

368 COLLOQUIUM: THE DEVELOPMENT OF WESTERN GEOGRAPHIC THOUGHT/DISCUSSION

The colloquium examines the principal orientations, themes, and debates within emergent professional geography communities in the nineteenth and twentieth centuries and the professional structure of the field as it exists in research, educational, and applied contexts. Designed primarily for entering graduate students in geography. Mr. Koelsch/Offered every year

369 SEMINAR IN ENVIRONMENT AND DEVELOPMENT/SEMINAR

The complex, often counter-intuitive, linkages between nature, society, and technology have produced more failures in attaining development objectives than successes. The seminar focuses on exploring reasons and explanations for this mixed result. Case studies from a wide range of economic, social, and environmental settings are examined to isolate principles of successful development. Ms. Rocheleau, Mr. Johnson/Offered periodically

370 ANIMAL AGRICULTURE/ LECTURE, DISCUSSION

Animals and humans have a long history of close association. First as hunters and then as domesticators, humans have relied on animals for food, fiber, labor, and companionship. The ecology of many diseases also links people to the animals that they exploit. Today animals play an increasingly important role in efforts to increase food production and to improve diet quality in support of a growing human population. Both terrestrial and aquatic animal systems, and the theory and practice of their intensified exploitation, are examined in this seminar. Mr. Johnson/Offered every other year

373 SEMINAR IN URBAN GEOGRAPHY/SEMINAR

Through readings and discussion, this seminar focuses on major research problems in urban geography. Each student formulates a research problem and designs and executes a research project. Prerequisite: permission of instructor. Ms. Hanson, Mr. Angel/Offered every other year

393 GIS AND INTERNATIONAL DEVELOPMENT/SEMINAR

The course focuses on the broad philosophical issues underlying the implementation of Geographic Information Systems and related information technologies in an International Development context. It will consider issues concerning technology, policy and democratic values and the role of information technology in democratic societies. It will explore institutional questions regarding implementation of GIS in developing countries and specific issues of technology transfer. Participants will be introduced to the major funding agency programs, their philosophical and structural character, implementation strategies and system design procedures. This course is a requirement for all students in the MA Program in GIS and International Development. Prerequisite: Geography 190 and permission of the instructor. Mr. Eastman and Staff/Offered every year

395 ECONOMIC DEVELOPMENT AND POLICY ANALYSIS/SEMINAR

Refer to course description under International Development 395. Ms. Seidman/Offered periodically

396 SEMINAR IN THE PHILOSOPHY OF CARTOGRAPHY/SEMINAR

This seminar deals with the need, in the light of significant technological advances in the mapping sciences, to reconsider the fundamentals and the scope of cartography. In particular, it focuses on the need to closely examine the purposes behind mapping and the interlinking demands of data, design, structures, scale, generalization, aesthetics, information and communication. Mr. Steward/ Offered periodically

397 ADVANCED TOPICS GIS/ LECTURE, LABORATORY

An advanced course in GIS concentrating on issues of database development, error and decision making. Topics include geodesy, projections, error sources, assessment and propagation, analysis under conditions of uncertainty, and multi-criteria and multi-objective decision making. The course also incorporates a seminar section on GIS research themes. This course is a requirement for all students in the MA Program in GIS and International Development. Prerequisite: Geography 190 and permission of instructor. Mr. Eastman/ Offered every year

Geology

■ PARTICIPATING FACULTY

Jacque L. Emel, Ph.D.: hydrology and hydrogeology

Stanley R. Herwitz, Ph.D.: hydrology, geomorphology, paleoecology

Laurence A. Lewis, Ph.D.: geomorphology, soils

■ UNDERGRADUATE COURSES

No formal program in geology exists, but several courses are offered each year. Students interested in the geological sciences should contact the Graduate School of Geography or one of the participating faculty to plan an appropriate major leading to graduate work in the area.

100 INTRODUCTION TO GEOLOGY/LECTURE

An introduction to the basic principles of physical and historical geology. Topics covered include the formation of earth and earth materials, plate tectonics, volcanism, plutonism, metamorphism, sedimentary geology, stratigraphy, structural geology, radiometric dating, paleontology, glacial processes, and the history of life. The processes that shape the surfaces of other planets in our solar system are also considered. Mr. Herwitz/Offered every year

114 GEOMORPHOLOGY/LECTURE

The theory of plate tectonics is explored in relation to the uplift of mountains, tectonics, and volcanism. The gradual wearing down of the earth's surface by hydrological processes is emphasized in the latter part of the course. Prerequisite: Geography 014, Geology 100, or permission of instructor. Mr. Lewis/Offered every year

118 ENVIRONMENTAL GEOLOGY/LECTURE

Examination of the basic concepts and processes within the earth sciences relative to the evaluation of risks and decisions on future policies of land use and resource utilization. The emphasis is on aspects of the environment of particular interest to geographers, geologists, and planners. Prerequisite: Geography 014, Geology 100, or permission of instructor. Staff/Offered every other year

211 GEOMORPHOLOGY OF HUMID TROPICS/LECTURE, DISCUSSION
The humid tropics—home of the rainforest, dry forest, and savanna—are areas of special interest to physical geographers. Deep weathering of rocks, rapid soil erosion when the forest or grasses are removed, great rivers in the tropics, and the devastating impact of human intervention are among the topics explored. Prerequisite: Geography 114, Geology 114, or permission of instructor. Mr. Lewis/Offered every other year

250 PLANETARY GEOLOGY/ RESEARCH SEMINAR
Discussion sessions on the geological significance of imagery of the moons and rocky planets of our solar system. Photographic and digital image processing procedures will be examined in detail. Assigned readings will be from the textbook *Planetary Landscapes* and recent publications from the journal *Icarus*. Students pursue independent research projects on planetary geomorphology using the available imagery. Enrollment in the course requires successful completion of Geology 100, Introduction to Geology. Mr. Herwitz/ Offered every other year

271 HYDROGEOLOGY/ LECTURE, DISCUSSION
An introduction to both the geological and hydrological factors controlling the occurrence and development of groundwater and the methods and impacts of groundwater management. Ms. Emel/Offered every year

277 GEOLOGY OF OCEANIC ISLANDS/RESEARCH
This field-oriented course on the geological history of Bermuda consists of three parts: (1) weekly meetings during the first half of the semester involving lectures, readings, and discussions; (2) a one-week field and research experience in Bermuda during mid-term break; and (3) presentation of research results during the second half of the semester. Prerequisite: Geology 100, Introduction to Geology. Mr. Herwitz/Offered every other year

Government and International Relations

■ DEPARTMENT FACULTY

Brian J. Cook, Ph.D., chair: U.S. public policy, public administration, environmental politics, bureaucratic politics

John C. Blydenburgh, Ph.D.: elections, polling, U.S. national politics, political psychology

Cynthia H. Enloe, Ph.D.: women and politics, militarization, Asian politics, British politics, ethnic and racial politics

Beverly C. Grier, Ph.D.: African politics, international development, women's studies, U.S. black politics

Bradley S. Klein, Ph.D., Political theory, international relations, U.S. foreign policy, politics of the media

Sharon Perlman Krefetz, Ph.D.: U.S. urban politics, suburban politics, women and politics

Mark Miller, J.D., Ph.D.: American government, politics of law and the judiciary, Congressional politics, lawyers and politics

Zenovia A. Sochor, Ph.D.: Soviet Union and its successor states, comparative politics, foreign policy

Robert J. Vitalis, Ph.D.: international relations, political economy, Middle East politics

■ ADJUNCT FACULTY

Douglas J. Little, Ph.D.: Department of History

Barbara P. Thomas-Slayter, Ph.D.: Department of International Development

VISITING FACULTY

George M. Lane, M.A.: U.S. foreign policy, arms control, Middle East politics, U.S.-European relations

■ UNDERGRADUATE PROGRAM

The study of politics at Clark University is the study of important questions that face people of all countries. Why do regimes collapse and what replaces them? What are the rights of the individual versus the powers of the state? How can public policies improve relations between women and men, and between different racial groups? Most important, who decides such questions and how? The department offers courses that address these questions and others in international relations, American politics, and comparative politics. The objective is to provide theories and concepts, relevant information, and tools for investigation so that students can develop their own answers.

■ REQUIREMENTS FOR THE GOVERNMENT MAJOR

The major is organized to provide an introduction to the study of politics, as well as an opportunity to explore one particular subfield in greater depth. The choice of subfields allows a student to concentrate in one area of politics. There are three subfields offered by the Government Department: American politics and public policy, comparative politics, and international relations.

A student must take fourteen courses for the major. Although the number of required courses is fixed, students have considerable leeway in choosing particular courses. Most of the courses are in the Government Department. A few are from other disciplines; these courses complement the study of politics with other perspectives, as well as explore the relationships between government and other essential sectors of society. The fourteen required courses are divided into two categories:

General government requirements: seven courses

Subfield specialization requirements: seven courses

General Department requirements
Seven courses:

(1) one subfield introductory course (in addition to the introductory course in one's chosen subfield);

(2) the economics course, Issues and Perspectives, Economics 10;

(3) one course in normative political theory, taken in the Government Department (Government 203, 205, 206, or 229);

(4) one course in research methods and skills, Government 107; and

(5-7) three government courses from outside one's chosen subfield.

Subfield specialization requirements
Seven courses:

(8) the introductory course to one's chosen government subfield (Introduction to American Government or Introduction to Comparative Politics or Introduction

to International Relations) [Note: one can take History 069 or Government 069 to fulfill this introduction to the international relations requirement.]

(9-11) three additional Government courses in one's chosen subfield (one of these three must be in the form of a seminar in one's subfield, taken in the junior or senior year); and

(12-14) three courses, related to the subfield, from outside the Government Department. (A list of related courses is available from the Government and International Relations Department Office.) One of these three courses must be in History. The two specific "related" courses should be chosen with a Government Department advisor.

In summary, a total of fourteen courses—ten in government, one in economics, one in history, and two others from related disciplines—must be taken to fulfill the requirements for the government major.

■ MINOR IN GOVERNMENT

A minor in Government requires a minimum of six courses taken within the department. Specifically, one of the six courses must be an introductory course (Govt 050, 069, or 070); one must be either in political theory (Govt 203, 205, or 206) or in research methods (Govt 107); and the four additional courses can be in any assortment of subfield areas, but two of these four courses must be at the 200 level. An internship supervised by a Government Department faculty member and approved political science courses taken as part of an accredited Study Abroad program may count toward the Government minor.

■ THE INTERNATIONAL RELATIONS CONCENTRATION: AN OPTION

This option is above and beyond the usual international relations subfield choice. It is not required. The international relations concentration was established in 1980 in conjunction with the Department of History. Students choosing this concentration must still satisfy the general requirements for the government major. The core of the international relations concentration includes Government 069, History 238, Economics 108, and a seminar. Students must then, in addition, choose one of the following analytical clusters: world economics or comparative diplomacy, or a self-designed area studies. Students must take an additional three courses in one of these clusters. Students who complete the appropriate courses receive a notation on their final transcript: "Concentration in International Relations." For more information, see the International Relations entry in the catalog.

■ INTERNSHIPS AND STUDY ABROAD

Internships in American local, state, and federal government agencies; independent public interest groups; private law firms; and companies can earn students Government major credits. Study Abroad may also fulfill major requirements. To receive government credit, a student must work with his or her faculty adviser.

■ HONORS IN GOVERNMENT

Students with outstanding academic records by the middle of their junior year may apply to the Honors Program in the Government Department. The Honors Program helps expand research and writing skills through an in-depth, systematic analysis of one topic. Students can achieve honors by successfully completing the Honors Program, which involves researching, writing, and defending a senior thesis. Students should submit applications to the Honors Program by March 1 of their junior year.

NONMAJOR CONCENTRATION

Certain fields of study can be taken as concentrations in addition to and complementary to the Government major. Some of these concentration requirements may also fulfill Government major requirements. (See specific catalog sections on these concentrations.)

STUDENT HANDBOOK

The Government Department publishes a handbook that contains extensive descriptions of major requirements, programs, courses, and faculty. Copies are available in the Government Department Office, Jefferson Academic Center, Room 302.

GENERAL COURSES

102	*Frirst Year Seminar: Selected Topics in Government and Politics*
107	*Research Methods*
202	*Applications of Game Theory*
203	*Seminar: Political Theorists and Their Theories*
205	*Roots of Political Thought*
206	*Recent Political Theory*
229	*Seminar: Social and Democratic Theory*
299	*Senior Thesis in Government and International Relations*
299, sec. 1	*Directed Readings*
299, sec. 5	*Special Projects*
299, sec. 9	*Internship*

AMERICAN POLITICS AND PUBLIC POLICY

050	*Introduction to American Government*
145	*America and the Changing World Economy*
154	*The Politics of Public Policy in the U.S.*
157	*The Politics of Environmental Issues*
170	*American Political Thought and Behavior*
172	*Suburbia: People and Politics*
175	*Women and Politics*
184	*Politics and Markets*
204	*The American Presidency*
209	*The U.S. Since 1945*
213	*Policy Analysis*
214	*Seminar: Business and Politics*
215	*State Government and Politics*
220	*Urban Politics: People, Power, and Conflict in U.S. Cities*
221	*Seminar: Urban Policy Internship*
223	*Seminar: Suburban Policy Issues*
224	*African-American Politics in the United States*
225	*Seminar: History of African-American Women*
248	*Deception and Manipulation in Politics*
251	*American Political Parties and Pressure Groups*
253	*Judicial Politics*
254	*American Constitutional Law*
255	*The Politics of Congress*
281	*Seminar: The Politics of Bureaucracy in the U.S.*
282	*Seminar: Housing Policies*
291	*Seminar: Lawyers and Politics*
292	*Seminar: Politics Inside Organizations*
294	*Seminar: Campaigns and Elections*
297	*Seminar: Advanced Topics in American Politics*

COMPARATIVE POLITICS

070	*Introduction to Comparative Politics*
103	*Africa and the World*
112	*Comparative Authoritarian Systems*
117	*Revolution and Political Violence*
125	*Development Problems*
136	*Sub-Saharan Africa: Issues and Problems*
178	*South Africa: History and Contemporary Politics*
182	*Politics of France, Germany, and Great Britain*
186	*Upheaval in Eastern Europe*
207	*Seminar: Politics of Development: African, Asian, and Latin American*
208	*Comparative Politics of Women*
219	*Seminar: The Politics of Land: Kenya, Zimbabwe, and South Africa*
228	*Comparative Politics of Race, Ethnicity, and Gender*
232	*Seminar: Social Justice and Development*
236	*Politics of Vietnam and the Philippines*
256	*Politics of the Soviet Union and Its Successor States*
261	*Seminar: Women and Militarization in a Comparative Politics Perspective*
265	*Politics of Japan*
268	*Europe 1992: Political Integration*
286	*Seminar: Advanced Topics in Comparative Politics*

INTERNATIONAL RELATIONS

069	*Introduction to International Relations*
103	*Africa and the World*
145	*America and the Changing World Economy*
179	*Comparative Foreign Policy*
211	*The United Nations*
237	*The Arab State System*
245	*U.S. Foreign Policy—Middle East*
247	*Seminar in Global Capitalism*
250	*National Security Policy Making in the U.S.*
280	*Soviet Foreign Policy and Its Aftermath*
285	*Seminar: Special Topics in Peace Studies*
289	*Seminar: Advanced Topics in International Relations*

COURSES

050 INTRODUCTION TO AMERICAN GOVERNMENT/ LECTURE, DISCUSSION

This course is an introduction to the American political processes and the performance of the American governmental system, primarily devoted to an overview of the contemporary structure and operation of national institutions. The course also addresses American political culture, voting and elections, the evolution of federalism, and important public issues, such as civil rights, civil liberties, and economic change. Mr. Cook, Mr. Miller/ Offered every semester

069 INTRODUCTION TO INTERNATIONAL RELATIONS/ LECTURE, DISCUSSION

The course is an introduction to basic concepts in the analysis of international relations, e.g., the "balance of power," as well as to alternative perspectives, e.g., "realism" in which these concepts are embedded. We review the use of these perspectives by different analysts in explaining the rise and fall of the "Cold War System," and we assess the dynamics of the "Post-Cold War System" through case studies of such issues as the 1991 Gulf War, the dynamics of the international human rights movement, the Israeli-Palestinian conflict, and the politics of foreign trade.

[Note: Students may take History 069 in place of this course for the Government major requirement for introduction to international relations. A student cannot take both History 069 and Government 069 for credit.] Mr. Vitalis, Mr. Tanaka/Offered every year

070 INTRODUCTION TO COMPARATIVE POLITICS/ LECTURE, DISCUSSION

This course concentrates on two countries' politics each year: Britain and Mexico one year, and France and Canada in the alternate year. By looking at two countries in depth, the course explores political issues common to all countries, such as the role of the military, the relations between racial and ethnic groups, and how individual citizens become politically active. Open to majors and nonmajors. Ms. Enloe/Offered every year

102 FIRST-YEAR SEMINAR: SELECTED TOPICS IN GOVERNMENT AND POLITICS

This course is designed for a small group of first-semester, first-year students. Different Government professors teach this seminar on special topics explored in depth.Staff/Offered periodically

103 AFRICA AND THE WORLD/ LECTURE, DISCUSSION

Refer to description under History 103. Ms. Grier/Offered every other year

107 RESEARCH METHODS/ LECTURE, DISCUSSION

The focus of this course is the logic of the research process: from developing a research design (e.g., formulating and stating testable hypotheses and operationalizing concepts) to collecting and analyzing appropriate data (e.g., conducting survey research and using the computer to generate contingency tables and calculate measures of association). The broad concepts that underlie various methods are considered, as are statistical manipulations necessary to employ them. Students design research projects independently or in teams, and analyze data from recent U.S. elections and public opinion polls. Mr. Blydenburgh, Mr. Cook, Ms. Krefetz/Offered every year

112 COMPARATIVE AUTHORITARIAN SYSTEMS/ LECTURE, DISCUSSION

One of the most interesting questions of today is why are so many authoritarian regimes suddenly toppling? Has the era of dictators and grand designs passed, or is this a transitional phase leading to new forms of demagoguery and repression? Through a comparative study of several authoritarian regimes, the course seeks to understand the dynamics of modern authoritarianism: its inception and structure, its transitional or permanent nature, and its distinct variations. The course first examines prevalent historical examples (e.g., Hitler's Germany or Franco's Spain), and then selects contemporary case studies from Europe, Latin America, and the Middle East. Ms. Sochor/ Offered every other year

117 REVOLUTION AND POLITICAL VIOLENCE/LECTURE, DISCUSSION

This course analyzes the concept, the causes, and the process of revolution. Why do tensions in some political systems explode into revolutions, while others fizzle out, are suppressed, or are modulated through reform? Is revolution inevitable? How does it differ from terrorism, guerrilla warfare or coups? To answer these questions, this course examines theories of revolution as well as case studies. The Russian and Chinese revolutions receive particular attention as twentieth-century prototypes; comparisons are then drawn to more recent revolutions in Eastern Europe, the Middle East, and Latin America. Ms. Sochor/ Offered every year

125 DEVELOPMENT PROBLEMS/ LECTURE, DISCUSSION

Refer to course description under International Development 125. Ms. Thomas-Slayter/Offered every year

136 SUB-SAHARAN AFRICA: ISSUES AND PROBLEMS/ LECTURE, DISCUSSION

Refer to course description under International Development 136. Ms. Grier, Ms. Thomas-Slayter/Offered every other year

145 AMERICA AND THE CHANGING WORLD ECONOMY/ LECTURE, DISCUSSION

This course is an introduction to international political economy or the study of the interaction of wealth, poverty, power, and powerlessness in the global arena. We analyze the role played by the United States in shaping the post-World War II economic order. The historical analysis helps us understand contemporary debates about the causes and consequences of America's economic "decline," as well as prospects for the future. Taking Government 069 or 209 (or equivalent) prior to this course is strongly recommended. Mr. Vitalis/Offered every year

154 THE POLITICS OF PUBLIC POLICY IN THE U.S./LECTURE, DISCUSSION

How do ideas become policies? Who influences decisions about public action? Do the dynamics of policy making vary across issues? This course investigates the politics of policy making at the national level. Different frameworks for understanding policy making are introduced, and the roles of, and interactions among, the principal policy-making institutions are examined. Policy issues examined in depth may include voting rights, affirmative action, social security, and health care reform. Class meetings include simulations, experiments, and student presentations. Government 050 is strongly recommended as a prerequisite. Mr. Cook/Offered every other year

157 THE POLITICS OF ENVIRONMENTAL ISSUES/ LECTURE, DISCUSSION

Modern environmental problems have significant social, economic, and political roots. This course provides a basic understanding of these critical dimensions of environmental issues. The course considers the sources of environmental problems, how issues arise, how policies have been formulated, and what effects the policies have had. The general topics include the physical nature of environmental problems, the social and political dynamics of environmental problems, and the development of environmental policy in the United States. One or more current environmental problems are examined through readings, discussion, guest lectures, and student research. Mr. Cook/Offered every other year

170 AMERICAN POLITICAL THOUGHT AND BEHAVIOR/ LECTURE, DISCUSSION

This course explores some of the most important ideas that have formed a distinctive American political culture–our shared values, beliefs, attitudes, and expectations of government. It also considers how this culture is transmitted by society, i.e., the process of political socialization, through which our political orientations and behavioral predispositions are shaped, and it connects political culture and socialization to contemporary political attitudes and behavior in the United States, especially voting in recent presidential elections. Ms. Krefetz/Offered periodically

172 SUBURBIA: PEOPLE AND POLITICS/LECTURE, DISCUSSION

The growth of suburbs in the United States since the end of World War II has had considerable impact on the nature of our metropolitan areas. This course focuses on the following questions: Why has this growth occurred? What are the characteristics of the people who live in suburbs? Is suburban homogeneity a myth or reality? How are suburbs governed? What is suburban political participation like? What are the patterns of policy making in issues such as education, zoning, and property taxes? Ms. Krefetz/Offered every other year

175 WOMEN AND POLITICS/ LECTURE, DISCUSSION

This course explores the political attitudes, behavior, and status of women in the United States. Views on the nature of women and their "proper" role in society and the state, set forth by classical political philosophers in ancient times, are contrasted with ideas introduced by women's rights theorists, beginning in the eighteenth century. The rise of the women's movement in the nineteenth century and the battle for female suffrage are considered as a backdrop for understanding the rebirth of feminism in the 1960s and the struggle over the Equal Rights Amendment. Other topics deal with contemporary American politics, including: gender differences in political socialization and political participation, the "gender gap" in voting preferences, women as politicians and bureaucrats, and efforts by women to influence public policies. Ms. Krefetz/Offered every year

178 SOUTH AFRICA: HISTORY AND CONTEMPORARY POLITICS/LECTURE, DISCUSSION

This course acquaints students with the forces that have shaped the political system of contemporary South Africa. The structure of the economy (mining, agriculture, and industry) is examined with attention paid to the role of African labor. Dutch and British colonialism, the rise and consolidation of Afrikaner nationalism, the introduction and implementation of apartheid, the struggle of Africans and their allies against apartheid, the role of African women in society and politics, and the nature of politics since the release of Nelson Mandela from prison are among the topics covered. Ms. Grier/Offered every year

179 COMPARATIVE FOREIGN POLICY/LECTURE, DISCUSSION

This course explores the factors influencing the formulation and execution of foreign policy. Attention is paid to the international setting, as well as the domestic sources, of foreign policy making. What makes a country "powerful" in the international arena; how has the nature of power changed since World War II? What are the role of perceptions and misperceptions in a crisis situation? The course explores the process of foreign policy making from the perspective of various countries, including Europe (Western and Central), the Soviet Union and its successor states, and China and Cuba. Ms. Sochor/ Offered every other year

182 POLITICS OF FRANCE, GERMANY, AND GREAT BRITAIN/ LECTURE, DISCUSSION

A comparative study of the major Western European political systems. Study of the political historic development lays the basis for comparison of modern functions of government. Emphasis is placed on systemic analysis and its importance for comparative politics. Staff/Offered every year

184 POLITICS AND MARKETS/ LECTURE, DISCUSSION

The theory of capitalism becomes an ideology when used to explain politics and government. That is at the core of American political culture: the concepts of market economics permeate our understanding of how government works. But do these concepts work? Are they suitable to explain the workings of a democratic political system? What is the effect of this thinking on what Americans value as a nation? This course seeks answers to questions by applying economic tools to American national government and evaluating the results. Mr. Blydenburgh/Offered every other year

186 UPHEAVAL IN EASTERN EUROPE/LECTURE, DISCUSSION

Within a dramatic and short space of time, Eastern Europe has been transformed from a homogenized communist bloc to a region brimming with diversity, complexity, and unfulfilled potential. The course examines Eastern Europe through its stages of transformation, ranging from Stalinism to pluralism. One of the key questions addressed is: Why did the revolutions of 1989 occur? Additional questions automatically surface: Which preceding events paved the way for 1989? How did the communist regimes collapse so quickly? Why did the revolutions vary from "velvet" (Czechoslovakia) to "violent" (Romania)? What are the implications for Marxism? Ms. Sochor/Offered every year

202 APPLICATIONS OF GAME THEORY/LECTURE, DISCUSSION

Game theory was invented by John Von Neuman in the 1920s as a language and a logic for analyzing human conflict. It purports to be useful (and your professor believes it is) in systematically identifying the best strategies for resolving many types of conflicts. This course emphasizes understanding and applying the language and the logic. The course also deals with applications and illustrations, for example, to international relations, nuclear confrontation, political campaigning, and other real-life situations. Emphasis is on "two-person" models with a selective review of "n-person" models. Students learn to use bargaining, threats, commitments, mediators, ignorance, and power in resolving conflicts. Mr. Blydenburgh/Offered every other year

203 POLITICAL THEORISTS AND THEIR THEORIES/ SEMINAR

This course focuses on one or two men or women whose theories have influenced ideas about power, governing, liberty, equality, or justice. By focusing on only one or two thinkers, we explore in depth their lives and the societies and events that shaped their ideas. Members of the Government Department take turns offering this course. Among the theorists who have been featured are Alexis de Tocqueville, Hannah Arendt, and Karl Marx. Staff/ Offered every year

204 THE AMERICAN PRESIDENCY/LECTURE, DISCUSSION

This course focuses on the office of the presidency and the leadership styles of American presidents. We examine the president's changing role in American politics; the evolution of the modern presidency; and the selection and nomination process and presidential character. This course looks critically at the office of president and proposes reforms for the future. Mr. Miller/Offered every other year

205 ROOTS OF POLITICAL THOUGHT/LECTURE, DISCUSSION

Western political thought from the classic Greek period to the Renaissance is analyzed through contributions by major thinkers. The Socratic philosophers form the basis. The revolution of Christianity provides the introduction to the Dark and Middles Ages. The Machiavellian era represents pure power politics before Western thought turned to the humanism in the Renaissance. Staff/Offered every year

206 RECENT POLITICAL THEORY/LECTURE, DISCUSSION

Political theory in its modern, programmatic form is distinguished from the belief structures of ideology. The three dominant trends of socialism, democracy, and conservatism are discussed from an evolutionary and contemporary point of view. Other directions or excesses of the trends are included in the general context of modern social, political, and economic forces. Staff/Offered every year

207 POLITICS OF DEVELOPMENT: AFRICAN, ASIAN, AND LATIN AMERICAN/SEMINAR

The course examines the theoretical debates surrounding concepts such as development, modernization, underdevelopment, dependency, and the Third World. It looks in detail at the politics in three developing countries, selected from sub-Saharan Africa, Asia, Latin America, and the Caribbean. The role of political parties, the bureaucracy, the military, the extremes of wealth and poverty, land distribution, gender, and the impact of global economic and political forces on these countries are examined. Ms. Grier/Offered every year

208 COMPARATIVE POLITICS OF WOMEN/LECTURE, DISCUSSION

This course explores the roles, priorities, strategies, and theories of women in the politics of industrialized and developing countries. Causes for changes—or lack of genuine changes—in women's political influence are investigated to shed light on those countries' political systems. The politics of industrialization, revolution, sexuality, labor, cross-race alliances, and the family are discussed. One or more previous courses in government or in women's studies is strongly advised. Ms. Enloe/Offered every other year

209 THE U.S. SINCE 1945/LECTURE

Refer to course description under History 209. Mr. Little/Offered every other year

210 PALESTINE, ISRAEL AND THE ISRAELI-ARAB CONFLICT

The goal of this class is to present systematic analysis of the basic problems that have to be addressed in the Israeli-Palestinian-Arab conflict and to assess the prospects for a peaceful, negotiated solution. Class will involve a variety of group exercises, including case study analyses of key "crises" in the unfolding of the conflict. Throughout the semester, participants in the class will analyze and "act" as one of the sides—1. Palestinians; 2. Jordanians; 3. Israelis; 4. Syrians—involved in the conflict and now confronting the challenges of conflict resolution via negotiations. Mr. Vitalis/ Offered every other year

211 THE UNITED NATIONS/ LECTURE, DISCUSSION

The core component of this course is participation in the Harvard National United Nations Conference and National Model U.N. Conferences. Members of the class represent Clark University at the conference by acting as delegates from nation-states. Issues ranging from disarmament to human rights to current political crises are researched. Students prepare resolutions and speeches and learn the rules of procedure operative at the United Nations. Oral reports and a written paper are required. Open to all qualified students, though class size is limited and permission of the instructor is required. Mr. Vitalis/ Offered every year

213 POLICY ANALYSIS/ LECTURE, DISCUSSION

Which public policy proposals will work and which will fail? What costs and benefits will a program generate? What impact will a policy have? Policy analysis draws on political science, economics, and other social sciences to answer questions like these for public officials who must decide what to do about the increasingly complex problems facing modern society. By examining policies regarding the environment, the economy, public health and welfare, and other areas, the course helps students understand critical public problems and potential solutions in multidimensional ways. The major assignment is participation in a class project analyzing a current policy problem. Limited to juniors and seniors. Mr. Cook/Offered every other year

214 BUSINESS AND POLITICS/SEMINAR

This course focuses on the tension between private economic forces and public political power. The theoretical aspects are explored through readings of major writers in this area. The practical aspects are dealt with through the use of community resources. This course permits individualized reports in specific areas of interest. Enrollment is limited to twenty students. Staff/ Offered every other year

215 STATE GOVERNMENT AND POLITICS/LECTURE, DISCUSSION

This is an overview of the operation of state governments, explaining the distinctive features of states in terms of their individual political, economic, historical, legal, and demographic characteristics. The focus is on how these features explain state political systems in the present and how they are likely to shape the states of the future. Special attention is given to Massachusetts and other Northeastern states. Prerequisite: Government 150. Mr. Blydenburgh/Offered every other year

219 THE POLITICS OF LAND: KENYA, ZIMBABWE, AND SOUTH AFRICA/ SEMINAR

The seminar explores the role land plays in the politics of three countries in Africa that experienced "settler colonialism." It examines the historical and contemporary development of land ownership in each country and explores the relationship between these developments and issues of wealth, poverty, political organization, and repression and women's roles. Through fiction, journal and newspaper articles, scholarly monographs, and films, the course explores the question of the relevance of the experiences of Kenya and Zimbabwe with land reform to a post-apartheid South Africa. Ms. Grier/Every other year

220 URBAN POLITICS: PEOPLE, POWER, AND CONFLICT IN U.S. CITIES/LECTURE, DISCUSSION

The focus is the socioeconomic and political forces affecting city politics in the U.S. Topics include: the social, economic, and political nature of the city; fiscal constraints; federal and state urban policies; political machines; reforms; the "Post-Reform Era"; the community power debate; mayoral power and styles; regimes and coalition building; and efforts by blacks and Hispanics to gain political incorporation. Ms. Krefetz/Offered every year

221 URBAN POLICY/SEMINAR AND INTERNSHIP

This course picks up where the general Urban Politics course leaves off and concentrates on how cities make and implement policies and deliver services. The focus is on downtown redevelopment, neighborhood revitalization, and housing policies. To gain understanding of the complex bureaucratic, political, and idiosyncratic variables affecting urban policies, students do internships supervised by individuals involved in policy making or implementation in Worcester, e.g., an agency or organization working on redevelopment and/or housing issues. In seminar sessions, students share their experiences, combining the perspectives of scholars and practitioners. Government 220 or permission of the instructor is required. The course is limited to twelve students, with preference given to juniors and seniors. Prerequisite: Government 220 or permission of instructor. Ms. Krefetz/ Offered every other year

223 SUBURBAN POLICY ISSUES/SEMINAR

This course picks up where the introductory suburban politics course leaves off and explores politics and policy making on issues in suburban communities, especially zoning and land use, education, and property taxes. Students conduct original research on these issues in Worcester and the Boston suburbs. Prerequisite: Government 172 or permission of instructor. Ms. Krefetz/Offered periodically

224 AFRICAN AMERICAN POLITICS IN THE UNITED STATES/ LECTURE, DISCUSSION

This course examines the evolution of the relationship between African-Americans and the U.S. political system. Beginning with the civil rights era of mass mobilization, mass enfranchisement, and mass participation of African-Americans and ending with the current era of conservatism and the "new racism," the course explores how the legislative, judicial, and executive branches of government, the major political parties, and the mass media have responded to African-American demands for equality and justice. It also looks at the impact of the Congressional Black Caucus, big city mayors, independent African-American political parties and leaders, and the debates between African-American conservatives, liberals, and radicals. Ms. Grier/Offered every other year

225 HISTORY OF AFRICAN AMERICAN WOMEN/SEMINAR

Refer to course description under History 224. Ms. Grier/Offered every year

228 COMPARATIVE POLITICS OF RACE, ETHNICITY, AND GENDER/LECTURE, DISCUSSION

This course explores the politics of "ethnicity" and "race" for groups as different as Asian-Americans, black Britons, South African Afrikaners, Latin American Indians, Bosnians, and others in the politics of industrialized and Third World countries. The political interactions of ideas about "masculinity" and "femininity" with race, ethnicity, and state power are featured. Some previous study of international development, comparative politics, history, sociology, or women's studies would be useful. Ms. Enloe/ Offered every other year

229 DEMOCRATIC AND SOCIAL THEORY/ SEMINAR

"Democracy is the worst form of government in the world except for all the others." Twentieth-century critics of democracy are numerous, but so are its defenders. The concept's development, viability, and vitality are analyzed, as are its different forms, including liberal democracy, popular democracy, people's democracy, and social democracy. The patterns the forms follow and the alternatives to democracy they produce are discussed. The focus of the seminar is political theory; a prior knowledge of practical politics and ideology traditionally identified as "ism" is helpful. Staff/Offered every year

232 SOCIAL JUSTICE AND DEVELOPMENT/SEMINAR

Refer to course description under International Development 232. Mr. Nawawi/Offered periodically

236 POLITICS OF VIETNAM AND THE PHILIPPINES/ LECTURE, DISCUSSION

We analyze changes, and resistance to changes, that have occurred in these two countries. Peasant politics, elite politics, nationalism, foreign investment, the military, ethnic politics, and women's politics are explored. We investigate what this suggests about the entire region of Southeast Asia today. Ms. Enloe/Offered every other year

237 THE ARAB STATE SYSTEM/ LECTURE, DISCUSSION

This course focuses on the politics of "state building"—defining and institutionalizing the boundaries of the "nation-state"—in the post-World War I Middle East as a way of understanding the interaction of "international" and "domestic" factors in the historical evolution of "foreign" security and economic policy in Egypt, Syria, Iraq, Jordan, Lebanon, Saudi Arabia; and the Palestinian "state-in-formation." Prerequisites: Gov. 106, 169 or 179. Mr. Vitalis/Offered every other year

245 U.S. FOREIGN POLICY-MIDDLE EAST/LECTURE, DISCUSSION

This course provides an overview of U.S. foreign policy and diplomacy toward Israel and Arab countries since World War II. The first sessions review the factors affecting the formation and implementation of U.S. foreign policy in the Middle East. The remaining sessions deal with events since 1945 and how they have affected and been affected by U.S. policy. Mr. Lane/Offered every year

247 SEMINAR IN GLOBAL CAPITALISM

Refer to course description under Sociology 248. Mr. Ross/Offered every year

248 DECEPTION AND MANIPULATION IN POLITICS/ LECTURE, DISCUSSION

Twentieth-century Western societies have been strongly affected by the expansion of human consciousness through self-knowledge and technological change. However, simultaneous with the benefits of psychological development is the apparent rise of mass character disorders that are destructive of the essential values of Western culture. This seminar explores the psychological and historical roots of both changes and their implications for democratic government and contemporary political movements. Open to juniors and seniors only. Mr. Blydenburgh/Offered every year

250 NATIONAL SECURITY POLICY MAKING IN THE U.S./LECTURE, DISCUSSION

This course explores the domestic and international politics of American national security policy, focusing on the evolution and implementation of counterinsurgency and related strategies of intervention (military assistance, covert action, low-intensity conflict, etc.) in the "Third World." We examine the historical background and the principal policy-making institutions involved in security policy. Case studies focus on the Vietnam War, El Salvador, and the Arab-Persian Gulf. Prerequisites: Gov. 150 and 169 or equivalent. Mr. Vitalis/Offered every other year

251 SOCIAL MOVEMENTS AND INTEREST GROUPS OF THE LEFT AND RIGHT/LECTURE, DISCUSSION

This course examines the strategies of social movements and interest groups, in mobilizing resources in and lobbying the state. It compares the strategies used by contemporary leftist and rightist movements in the U.S. We will look at the theoretical frameworks used to study mobilization and action, including the pluralist and power elite, and "cycle" theories for interest groups, and collective action resource mobilization, and political process models of social movements. Staff/Offered periodically

252 POLITICAL PARTIES/ LECTURE, DISCUSSION

This course examines the historical developments of the two-party system in the U.S. and of the structures and activities of the two major parties. Also included is an examination of the historical successes and failures of various types of third parties. Staff/Offered periodically

253 JUDICIAL POLITICS/ LECTURE, DISCUSSION

This course explores the relationships between the courts and other sectors of the American political system. Among the topics studied are how judges are selected, how courts handle civil and criminal cases, judicial policy making, and how interest groups use the courts. Mr. Miller/Offered every other year

254 AMERICAN CONSTITUTIONAL LAW/LECTURE, DISCUSSION

This course focuses on the historic and contemporary role of the U.S. Supreme Court in interpreting the Constitution. Topics include the nature of federalism, powers of governmental institutions, freedom of speech and religion, equal rights, rights of the accused, and the issues of prayer and abortion. Mr. Miller/Offered every other year

255 THE POLITICS OF CONGRESS/LECTURE, DISCUSSION

An in-depth examination of the contemporary politics of the U.S. Congress from both an individual and institutional perspective. Topics include Congressional elections, differing views of representation, House-Senate differences, Congressional policy making, relationships between Congress and the courts, the presidency, the bureaucracy and interest groups, and the future of the institution. Mr. Miller/Offered every other year

256 POLITICS OF THE SOVIET UNION AND ITS SUCCESSOR STATES/LECTURE, DISCUSSION

This course examines factors in the formation and evolution of the Soviet and post-Soviet political systems. The course reviews critical junctures in Soviet political history, from Lenin to Gorbachev and beyond. A major focus—and major puzzle—is the Gorbachev period. Why did Gorbachev introduce radical reforms? Why did these reforms hasten the demise of the U.S.S.R. rather than revitalize the economy, the society, and the multinational union, as expected? Will Gorbachev's successors and the newly independent successor states prove to be more successful in their transition to market economies and democratic political systems? Ms. Sochor/Offered every year

261 WOMEN AND MILITARIZATION IN A COMPARATIVE POLITICS PERSPECTIVE/SEMINAR

We examine the analytical proposition that the process by which any country's military grows in influence is shaped by its ideas about "masculinity" and "femininity." We explore questions such as: What do women's own experiences in wartime and peacetime reveal about military politics? What do we expose about militaries when we look behind governments' policies to use women as mothers, wives, workers, or prostitutes? Do racial and economic differences shape a military's sexual division of labor? Countries such as Britain, Chile, the Philippines, and the United States are discussed. Previous government or women's studies courses are desirable. Limited to juniors, seniors, and graduate students. Ms. Enloe/Offered every other year

265 POLITICS OF JAPAN/ LECTURE, DISCUSSION

Japan is considered one of the world's powers. Yet its domestic political dynamics are not widely understood by Americans. This course explores the major factors shaping Japanese politics and government policies since 1945. Among the topics to be analyzed are: factional rivalries within major parties; the influence of bureaucrats; and the role of women, minorities, and business in politics. The course is open to majors and nonmajors. Ms. Enloe/Offered every other year

268 EUROPEAN INTEGRATION: AN EXPERIMENT IN INTERNATIONAL COLLABERATION/LECTURE, DISCUSSION

Western Europe is moving toward greater unity from traditional intergovernmental through a period of innovative supra-national to a rudimentary form for a multi-national state. The process raises conflicts between national vs. European politics. This conflict, expressed as an endo- versus an exo-national division, has provided new perspectives on mutual problems and has duplicated national legislative, executive, and judicial institutions at the European level. The process will change our understanding of such concepts as sovereignty and the national-state as Europe transforms a system not yet dead, while reaching for one still to be born. Staff/Offered every year

280 SOVIET FOREIGN POLICY AND ITS AFTERMATH/LECTURE, DISCUSSION

This course provides an overview of Soviet foreign policy from the country's uncertain beginnings as the first Marxist state to its dominant position as a superpower to its recent dissolution and collapse. The course considers the problems and goals of the successive phases of Soviet foreign policy. Emphasis is given to the "new thinking" in Soviet foreign policy introduced by Gorbachev, its policy implementation, and its repercussions. The course also examines the efforts of the successor states, especially Russia and the Ukraine, to devise viable foreign policy strategies in the aftermath of the disintegration of the U.S.S.R. Ms. Sochor/Offered every other year

281 THE POLITICS OF BUREAUCRACY IN THE U.S./SEMINAR

Administrative agencies wield considerable power and policy-making authority in American politics. What distinguishes one agency from another? How do bureaucratic agencies derive their power? How do Congress and the president attempt to control the bureaucracy? What kinds of politics prevail inside public agencies? Case studies of such agencies as the C.I.A. and the U.S. State Department and student research provide the vehicles for exploring these questions in depth. Government 050 strongly recommended. Mr. Cook/Offered every other year

282 HOUSING POLICIES/SEMINAR

This course focuses on the social, economic, and political factors that shape the federal government's housing policies and the implementation of housing programs by local governments in metropolitan areas of the United States. Among the major topics explored are: the myths and realities of public housing; urban renewal; gentrification; linkage; responses to homelessness; rent control; condominium conversions; and redlining, exclusionary zoning, and other forms of racial, gender, and income discrimination in housing. Ms. Krefetz/Offered every other year

285 SPECIAL TOPICS IN PEACE STUDIES/SEMINAR

Refer to course description under Peace Studies 285. Staff/Offered periodically

286 ADVANCED TOPICS IN COMPARATIVE POLITICS/SEMINAR

This is a course for juniors and seniors on specialized topics in comparative politics. The focus is different each year, and the course is taught by government faculty in fields of particular interest. For example, in 1994-95, the seminar focused on women and the state. Future topics will include the USSR and its successor states. Ms. Enloe, Ms. Grier, Ms. Sochor/Offered every year

289 ADVANCED TOPICS IN INTERNATIONAL RELATIONS/SEMINAR

The course is organized as a research seminar, focusing on historical-based approaches to, and problems in, U.S. foreign policy. The topic of the seminar varies from year to year. Substantial (twenty- to thirty-page) research paper required. Generally restricted to junior and senior I.R. majors; others may be admitted with permission of the instructor. Mr. Vitalis, Mr. Little/Offered every year

291 LAWYERS AND POLITICS/Seminar

This course examines the role lawyers play in American politics. Topics include lawyers in private practice, lawyers in legislatures, lawyers as judges, lawyers as lobbyists, government agency lawyers, and academic lawyers. Mr. Miller/Offered every other year

292 POLITICS INSIDE ORGANIZATIONS/SEMINAR

Complex formal organizations dominate modern society. The core argument on which this course is based is that organizations, especially bureaucratic ones, are best understood as political entities. Readings and class discussions focus on the development and application of concepts for understanding conflict, power, and governance in organizations. Case studies and student research provide the raw material for analysis and debate. Mr. Cook/Offered every other year

294 CAMPAIGNS AND ELECTIONS/SEMINAR

Nowhere is the political impact of the new technologies of communication and information processing more powerful than in the electoral system. A corps of professional campaign managers has emerged—women and men whose expertise has changed the meaning of elections in American politics. This seminar seeks to develop an understanding of this new and volatile source of political power through readings, research, and illustration. Mr. Blydenburgh/Offered every other year

297 ADVANCED TOPICS IN AMERICAN POLITICS/SEMINAR

This is a course for juniors and seniors on specialized topics in American politics. The focus is different each time it is offered, and the course is taught by Government faculty in fields of their interest. For example, in 1992-93, the seminar focused on the politics of Puerto Rico. Future topics will include the media in U.S. politics. Staff/Offered periodically

History

■ DEPARTMENT FACULTY

Drew R. McCoy, Ph.D., chair: early American history, U.S. intellectual and political history

Daniel R. Borg, Ph.D.: modern German history, modern European history, totalitarianism

Sarah J. Deutsch, Ph.D.: American social history, American women

Richard B. Ford, Ph.D.: African history, international development

Janette Thomas Greenwood, Ph.D.: American social, African-American history, and history of the South

Douglas J. Little, Ph.D.: U.S. diplomatic history, U.S. twentieth-century history

Paul Lucas, Ph.D.: England and France before 1800; European intellectual history, 1650-1945

Ronald K. Richardson, Ph.D.: European cultural history, British history and British Empire

Paul S. Ropp, Ph.D.: Chinese, social, and intellectual history

AFFILIATE AND ADJUNCT FACULTY

Michiko Y. Aoki, Ph.D.

Thomas C. Barrow, Ph.D.

John C. Brown, Ph.D.

Paul Burke Jr., Ph.D.

Everett Fox, Ph.D.

Beverly C. Grier, Ph.D.

William A. Koelsch, Ph.D.

George M. Lane, M.A.

Marcus A. McCorison, M.S.

Thomas P. Massey, Ph.D.

Zenovia A. Sochor, Ph.D.

Shelly Tenenbaum, Ph.D.

Richard P. Traina, Ph.D.

Robert J. Vitalis, Ph.D.

EMERITI

George A. Billias, Ph.D.

Robert F. Campbell, Ph.D.

Theodore H. Von Laue, Ph.D.

UNDERGRADUATE PROGRAM

The History Department offers a traditional major, a minor, and a variety of elective courses for nonmajors. Within the history major, students may specialize in one geographical area, such as America, Europe, or Asia; they may choose as their specialty one of the University's interdisciplinary concentrations, such as Asian studies, international relations, Jewish studies, or women's studies; or they may specialize in a particular period or in a type of history. For example, they may specialize in twentieth-century global history, comparative social history, the history of ideas, or the history of cultures.

The history major offers a liberal education with exposure to different fields of knowledge. It offers vigorous training in critical thinking; in the accumulation, organization, and analysis of information; and in clear and concise writing. In addition to preparation for graduate school and a teaching career in history, the history major provides an excellent background for careers in law; government; journalism; international affairs; museum, library, and archival work; and even business. With courses on every major geographical area of the world, and with conceptual approaches ranging from political and diplomatic to social, intellectual, and cultural, the History Department offers a rich and diverse curriculum.

UNDERGRADUATE MAJOR

The Major Requirements

History majors must take ten history courses and four nonhistory courses, chosen in consultation with advisors to form coherent programs of study. To assure that students explore one area of history in depth, five of the ten required history courses must be in a field of specialization. While a field of specialization usually is defined as one geographical area (e.g., U.S., Europe, or Asia), in special cases students and advisors may define a specialization chronologically or topically. In addition to expertise in one area, history majors acquire breadth of knowledge by taking at least two history courses in two regions of the world other than their specialization.

The history requirements are ten courses in history and four related courses outside of history.

The ten courses in history should meet the following conditions:

1) At least five courses must be taken in an area of specialization (defined geographically, topically, or chronologically). Of these five, at least three must be at the 200 level, and at least one must be a pro-seminar, seminar, or directed research.

2) In addition, at least two other history courses must be taken at the 200 level, preferably outside the specialization.

3) At least two courses must be taken in two geographical regions different from the student's area of specialization. (For example, a student specializing in U.S. history may meet this requirement by taking two courses in two of the following areas: Africa, Asia, Europe, Latin America, or global.)

4) At least one course, whether inside or outside the specialization, must be devoted primarily to a period before the nineteenth century.

5) One capstone course must be taken in the senior year, either the departmental capstone course or (with permission of the chair and the instructor) a research seminar or directed research course in the student's area of specialization. The capstone requirement cannot be met by any course used to meet conditions 1 through 4.

The student also must complete four nonhistory courses related to the student's main area of interest. These courses can be at any level and do not need to be in the same department, but they should be chosen in consultation with the student's advisor so that they are clearly related to the area of specialization. For example, a student interested in American or European intellectual history would find relevant courses in the history of art, science, literature, and/or philosophy. A student specializing in social history might take courses in sociology, government, psychology, and geography. For a student specializing in European or in an Asian history concentration, courses in relevant languages and cultures would count toward the fulfillment of this four-course requirement.

Every history major is required to select an advisor from the history faculty and to consult regularly with the advisor, especially before registering each semester. The student and advisor can design a coherent sequence of courses, moving from introductory to more advanced courses, design an area of specialization related to the student's interests and career goals, and choose nonhistory courses that enhance the area of concentration. They also can make decisions about advanced research courses and about possible enrollment in the departmental honors program.

Students who are considering the history major are urged (though not required) to take History 120, a proseminar on Writing History, during their sophomore year.

For information concerning predesigned structured concentrations (Asian studies, international development, international relations, Jewish studies, peace studies, and women's studies) see relevant sections in this catalog.

THE HONORS PROGRAM

The honors program in history provides challenging advanced courses for outstanding history majors. The program is valuable for would-be professional historians and for anyone pursuing a career requiring resourcefulness and analytical and writing skills.

To complete the honors program, the student must meet the general requirements for the major, choose a field of specialization, and earn four honors credits as part of, or in some cases in addition to, the ten required history courses. More specifically, a student enters the program by taking a prehonors seminar or proseminar (see below). Formal admission into the honors program is contingent upon the completion of a prehonors seminar and upon evidence of outstanding work in other history courses. Then, building on work in the prehonors course, the student writes an extensive research thesis (two course credits) under the supervision of the advisor. In addition, honors candidates undertake a directed readings course (one course credit) during their senior year, in the general field of their thesis topic. The program culminates with a written examination in the field of specialization and an oral defense of the student's thesis. The written examination and the oral defense is conducted by the honors committee, which includes the student's thesis advisor and two other members of the department. If the committee judges the work to merit the distinction of honors, the student's transcript will state that he or she majored in history with honors, with high honors, or with highest honors. If the committee finds the thesis or examination unsatisfactory, the student only receives ordinary history credit for the thesis and directed readings course.

THE PREHONORS SEMINAR OR PROSEMINAR

To enroll in the honors program, students must take one of the department's seminars or proseminars that emphasize the development of research, analytical, and writing skills. A significant part of these courses is devoted to the writing and revising of research papers. Students should consult with their advisors or the department chair, Professor McCoy, in selecting a course that satisfies the prehonors requirement. This course is normally taken during the junior year.

UNDERGRADUATE MINOR

Students who wish to obtain an undergraduate minor in history must meet the following requirements: a minimum of six history courses, at least three at the 200 level, and no more than four in any one geographical area. At least one of the six courses must be a seminar or a proseminar.

TEACHER CERTIFICATION

Students may receive certification to teach high school history in Massachusetts (and perhaps other states). Interested students should speak to the department chair.

GRADUATE PROGRAM

The areas of graduate study at Clark are American history and modern European history, with select non-Western historical themes as supporting fields. Emphasis is placed on American history because of the department's affiliation with the American Antiquarian Society. The Antiquarian Society provides graduate students with the facilities of one of the country's finest research libraries, with more than 750,000 volumes and valuable manuscripts relating to early American history prior to 1876. A dozen smaller libraries in Worcester, with combined holdings of more than one million volumes, further extend the resources of the Clark library, as does easy access to Boston, Providence, and New Haven-area research facilities.

The department offers graduate work in the form of reading seminars (colloquia), research seminars, and individual tutorials for both reading and research purposes. First- and second-year students take three courses each semester; one of these courses must be expressly devoted to research for the purpose of producing a substantial research paper. Beyond their research seminar, students fulfill their program by taking colloquia, additional research seminars, and upper division undergraduate courses. The director of the graduate program assigns incoming graduate students to faculty advisors, who help design student programs. With the permission of the advisor, a student is encouraged to take courses in other departments or colleges in the Worcester Consortium.

■ MASTER OF ARTS

The department awards the master's degree to students who have completed six courses and a one-year residence requirement; who have either submitted two substantial research papers prepared in two seminars, which are jointly equivalent to the master's thesis, or submitted a master's thesis; and who have passed the required oral examination. (The department admits part-time M.A. students, whose residency requirement is defined in terms of courses taken.)

Ph.D. candidates who have passed their preliminary examination (whether or not they will continue with a dissertation) may also receive the degree of master of arts.

■ DOCTOR OF PHILOSOPHY

The doctoral program enables students to master the discipline of history through research, reading, and teaching. In addition to meeting the seminar and course requirements outlined above, a student who enters without an M.A. degree ordinarily must spend at least three years in full-time residence at Clark, satisfy the language requirement, gain some experience in college teaching, pass the preliminary examination, and write a doctoral dissertation within seven years of matriculation. (In recent years the department also has admitted part-time Ph.D. students; their residency is defined in terms of courses taken.)

Language Requirement: Students concentrating in American and British history must pass an examination in one foreign language, normally French, German, Spanish, or Russian. Those specializing in European history must pass examinations in two foreign languages, normally French and German. The department chair designates an examiner in each language, who determines if the student is proficient enough to use the language as a research tool. All language requirements must be satisfied before the preliminary oral examination is scheduled.

First-year Exam: At the end of the first year, there is a one-hour oral exam based on the first year's course work. The first-year exam is required for all first-year graduate students, whether they come with or without an M.A.

Teaching Experience: Some teaching experience at the college level is desirable for the Ph.D. degree. Students normally meet this requirement in their second and third years as teaching assistants.

Fields: Soon after arriving at Clark, each student, in cooperation with the advisor, selects three fields and prepares for them in ways appropriate for her/his background and interests. Students specializing in American history normally cover the full scope of American history as one field. Those concentrating in non-American history normally offer one American field. Any student may include a nonhistorical subject as a field, usually within the social sciences, or prepare an interdisciplinary field.

Preliminary Examination: Before the end of the third year, students take an oral examination covering their three fields. For more details concerning the three-field oral exam, consult the *History Department Graduate Program Handbook*. The combined three-field oral examination constitutes the "preliminary examination" required by the Graduate Board. Students who have passed their preliminary examination may, upon request, receive the master of arts.

Dissertation: Students are advised to consider dissertation topics during their years of residence and to choose a possible dissertation advisor as soon as possible. The process of writing a dissertation is outlined in *Format Regulations for Theses, Dissertations, and Research Papers at Clark University*, which may be obtained from the thesis format advisor in the Graduate School Office.

COURSES

NOTE: Undergraduate courses are of two types: (1) survey courses designed for freshmen and sophomores, numbered with two digits or 100-199, and (2) advanced courses numbered 200-299. The latter carry no prerequisites (unless specifically noted) but generally carry a heavier workload than lower level courses. Some 300-level graduate courses are open to juniors and seniors with permission of the instructor. In case of doubt, students should consult their instructors. The term proseminar indicates courses of limited enrollment that combine reading, discussion, and written reports. The term seminar indicates a research course.

HISTORY DEPARTMENT COURSE LISTING BY FIELDS OF SPECIALIZATION

U.S. HISTORY

010	*Introduction to History*
011	*Survey of U.S. History to 1865*
012	*Survey of U.S. History since 1865*
016	*Race and Ethnicity in American History*
020	*America and the World*
038	*The United States and Vietnam*
145	*U.S. History through the Novel*
200	*America's Formative Years*
201	*Era of the American Revolution*
202	*The Early American Republic*
203	*Seminar in U.S. Urban History: Colonial—Modern Period*
204	*Interpretations of American History*
205	*History of the American West*
208	*The U.S., 1900-1945*
209	*The U.S. since 1945*
210	*Research Seminar in Early American History*
211	*Native American History through Autobiography*
212	*U.S. Urban History*
213	*Gender and the City in the U.S.*
214	*The American Civil War*
215	*The Age of Lincoln*
216	*American History in Comparative Perspective*

218 *U.S. in the 1920s and 1930s*
219 *History of American Women*
220 *Worcester Historical Museum/Public History/Research Seminar*
221 *African-American History*
222 *History of the South*
223 *The Civil Rights Movement*
224 *History of African-American Women*
226 *American Thought and Culture, 1740-1865*
227 *American Thought and Culture since 1865*
231 *America in the Gilded Age, 1877–1900*
232 *American Victorian Culture*
234 *Health and Disease in the American Habitat*
237 *Topics in U.S. Labor History*
238 *U.S. Foreign Relations since 1914*
239 *American Constitutional Law*
243 *American Antiquarian Society Seminar in American Studies*
245 *U.S. Foreign Policy: Middle East*
246 *The History of American Higher Education*
248 *Topics in American Social History*
249 *Research Seminar in American Social History*
286 *The Vietnam War*
291 *Advanced Topics in International Relations.*

EUROPEAN HISTORY

005 *Romans and Barbarians*
030 *Europe and Its Future*
070 *Our European Roots: Western Civilization from the "Fall" of Rome through the Renaissance and Reformation*
071 *Our European Roots: Western Civilization from the Seventeenth Century to the Present*
074 *The World and the West*
105 *Greeks and Barbarians in the Ancient Ecumene*
110 *Imperial Europe*
124 *Ethnicity and Nationalism in Modern Europe in Comparative Perspective*
157 *The Age of Nero*
158 *Modern English History*
161 *British India*
168 *The History of Capitalism*
229 *Classical Traditions and Modern Thought*
250 *The Formation of the Modern State: Group Consciousness, Individualism, and Social Organization in "Old Europe," 1550-1789*
251 *The Comparative Study of Revolutions: The French Revolution of 1789 and the Beginnings of Modern Revolutions*
252 *Nineteenth-century Europe*
253 *Twentieth-century Europe*
254 *Empire and Race in British History*
256 *Politics of the Soviet Union and Its Successor States*
257 *Europe since 1945*
258 *England's Old Regime*
259 *Modern Germany*
263 *Asians and Africans in European History*
271 *In Search of Humanity: Eighteenth-century European Values*
272 *In Search of Humanity: Nineteenth-century European Values*
273 *Modern European Culture*
280 *Soviet Foreign Policy and Its Aftermath*
292 *Women Mirrored in East and West*
293 *Seminar on Biography*
294 *Twentieth-century Western Culture*

JEWISH HISTORY

117 *Introduction to Hebrew Bible: Narrative and Law*
174 *The Jewish Experience*
262 *Jews and Christians in the Ancient World*

276 *Modern Jewish History and Thought*
277 *The History of Zionism in Israel*
278 *The Holocaust: A Study of Genocide*

LATIN AMERICAN HISTORY

177 *Latin America since 1825*

AFRICAN HISTORY

103 *Africa and the World*
178 *South Africa: History and Contemporary Politics*
179 *The History of Traditional Africa*
180 *History of Modern Africa*
269 *African Crisis*

ASIAN HISTORY

031 *Great Books of China*
038 *The United States and Vietnam*
080 *Introduction to Modern Asia*
084 *Japanese Civilization*
161 *British India*
181 *Traditional China*
182 *Modern China*
184 *Modern Japan*
281 *The Peoples Republic of China*
282 *Chinese Women in Literature and Society*
283 *Japanese Culture and Economic Development*
284 *Japan since World War II*
285 *Japanese Folklore*
286 *The Vietnam War*
288 *Seminar in Chinese History*
288 *The Atomic Bomb*
289 *Japanese Thought*
292 *Women Mirrored in East and West*

INTERNATIONAL DEVELOPMENT

035 *Villages of the Third World*
050 *Local Action, Global Change*
047 *Food, Population, and Environment*
103 *Africa and the World*
125 *Development Problems*
290 *Development Project Management*

INTERNATIONAL RELATIONS

069 *Introduction to International Relations*
245 *U.S. Foreign Policy: Middle East*
266 *Historical Identities*
268 *Foreigners Perceived: Intercultural Relations through Travel Writings*
284 *Cultural Identity and the Nation State*
288 *The Atomic Bomb*
291 *Advanced Topics in International Relations*

GENERAL GLOBAL HISTORY

074 *The World and the West*
090 *Survey of the Twentieth-century Global History*
162 *The History of the Modern Middle East*
168 *The History of Capitalism*
228 *Uses of the Past in History*
236 *The Arab State System*
255 *Global Relations: Twentieth Century*
260 *Nationalism and Global Interdependence*
274 *Black Liberation Consciousness*
275 *Black Lives*
293 *Seminar on Biography*
296 *Modes of Interpretation*

HISTORY COURSES

005 ROMANS AND BARBARIANS/ LECTURE, DISCUSSION

Refer to course description under Classics 005. Mr. Burke/Offered every other year

010 INTRODUCTION TO HISTORY/ LECTURE, DISCUSSION

Introduces basic problems of historical method and interdisciplinary study as revealed in American history. The nature of history, and the individual student's connection with American social history, are examined through autobiography, family history, historic fiction, and ethnicity. Emphasis is placed on reading, discussion, and writing one's own family history. Fulfills the historical perspective requirement. Mr. Ford/Offered every year

011 SURVEY OF U.S. HISTORY TO 1865/LECTURE, DISCUSSION

A survey of American history from the earliest seventeenth-century settlements through the end of the Civil War. The course is thematic and seeks to introduce students to historical inquiry and to stimulate creative inquiry into the origins and character of American civilization. Fulfills the historical perspective requirement. Mr. McCoy/Offered every year

012 SURVEY OF U.S. HISTORY SINCE 1865/LECTURE, DISCUSSION

This course chronicles the rise of America to world power, focusing on key internal and foreign policy developments and conflict. The private and public side of life and the diversity of Americans' experiences are highlighted. Attention is given to general political, social, economic, and intellectual developments. Fulfills the historical perspective requirement. Ms. Deutsch, Ms. Greenwood/Offered every year

016 RACE AND ETHNICITY IN AMERICAN HISTORY/ LECTURE, DISCUSSION

Explores the influence that racial and ethnic patterns have had upon the course of American history. In terms of race, it analyzes the impact that red, white, and black peoples have had upon American history from colonial times to the 1980s. Fulfills the historical perspective requirement. Ms. Greenwood/ Offered every year

020 AMERICA AND THE WORLD/LECTURE, DISCUSSION

This course places American history from roughly 1500 to the 1990s in a global context. The approach is comparative, as distinct from the domestic and diplomatic frameworks in more traditional surveys of the American past. Topics include changing patterns in race relations, the impact of America's revolutionary political tradition on the world, and the role of American business and culture in shaping the New World order of the 1990s. Fulfills the historical perspective requirement. Mr. Little/Offered every year

030 EUROPE AND ITS FUTURE/ FIRST-YEAR SEMINAR

Readings, discussions, and short papers using utopian novels (Orwell's 1984 and Huxley's Brave New World), social commentaries, and lectures to focus on the course and prospects of modern European society. Not an introductory course for the major. Fulfills the verbal expression requirement. Mr. Borg/Offered every other year

031 GREAT BOOKS OF CHINA/ FIRST-YEAR SEMINAR

Readings, lectures, discussions, and short papers based on some of the most important philosophical, historical, and literary texts in the Chinese intellectual tradition. Fulfills the verbal expression requirement. Mr. Ropp/ Offered every other year

035 VILLAGES OF THE THIRD WORLD

This course explores the nature of village life in Asia, Africa, and Latin America. Readings are anthropological and historical with several novels used to enliven readings and class discussions. Fulfills the verbal expression requirement. Mr. Ford/Offered periodically

038 THE UNITED STATES AND VIETNAM/FIRST-YEAR SEMINAR

Students improve their reading and writing skills by exploring the culture and history of modern Vietnam, and the history of American involvement in Vietnam, from the end of World War II until the present. Special emphasis is placed on the period of intense American political and military involvement in Vietnam in the years 1960 to 1973. During the last half of the course, students research and write term papers based on primary sources. Fulfills the verbal expression requirement. Mr. Ropp/Offered periodically

047 FOOD, POPULATION, AND ENVIRONMENT

Refer to course description under ID 147. Mr. Ford/Offered periodically

050 LOCAL ACTION/GLOBAL CHANGE/FIRST-YEAR SEMINAR

Refer to course description under ID 050. Mr. Ford/Offered periodically

069 INTRODUCTION TO INTERNATIONAL RELATIONS/ LECTURE, DISCUSSION

This course introduces key moments in the emergence of relations among nations in the modern world. It examines the way nation-states, as political, social, economic, and cultural units, have interacted (often violently) and attempted to create order. The course begins with the reconceptualization of sociopolitical relations into the nation (before and after revolutionary social movements), and then examines the changes within that unit as well as the pressures from outside its boundaries that have led to periods of imperialism, idealism, the Cold War, and recent police actions. Discussion includes the interplay between the efforts to form an international order as defined by Europe and reactions in the non-West to that expansion. [NOTE: This course fulfills the government major requirement for Introduction to International Relations. A student may not take both History 069 and Government 069 for credit.] This course was formerly Hist. 169. Mr. Vitalis/Offered every year

070 OUR EUROPEAN ROOTS: WESTERN CIVILIZATION FROM THE "FALL" OF ROME THROUGH THE RENAISSANCE AND REFORMATION/LECTURE, DISCUSSION

The goal is to familiarize students with the basic outlines of the developments of Western society and, therefore, the character of our collective identity. For the would-be history major, a secondary goal is the presentation of varieties of historical "angles"—cultural, political and military, economic and social—and the integration of these analytical approaches into a coherent, popular narrative. The medieval period is emphasized because our modern history is rooted in it. Students should take both History 70 and 71 as parts of a whole, but either course may be taken without the other. Fulfills the historical perspective requirement. Mr. Lucas/Offered every year

071 OUR EUROPEAN ROOTS: WESTERN CIVILIZATION FROM THE SEVENTEENTH CENTURY TO THE PRESENT/LECTURE, DISCUSSION

The goal is the same as History 070. This course covers the military revolution of the sixteenth century, the bureaucratic and scientific revolutions of the seventeenth century, the eighteenth-century Enlightenment, and the political, industrial, intellectual, and social revolutions of the nineteenth and twentieth centuries. Students should take both History 070 and 071 as parts of a whole, but either course may be taken without the other. Fulfills the historical perspective requirement. Mr. Lucas/Offered every year

074 THE WORLD AND THE WEST/LECTURE, DISCUSSION

This course surveys European interaction with the nonwhite world from the fifteenth to the twentieth century. While all dimensions of the European engagement overseas are touched upon, the course focuses on the social and cultural transformation of Europe as a result of the movements known as "expansion," "colonialism," and "imperialism." Readings reflect a mix of contemporary sources and modern historical works. Fulfills the historical perspectives requirement. Mr. Richardson/Offered periodically

080 INTRODUCTION TO MODERN ASIA/LECTURE

A survey of modern historical trends in India, China, Japan, Southeast Asia, and Korea. Through political biographies, literary selections, and general histories, the course compares native traditions, colonial experiences, and postcolonial developments in Asia since roughly 1800. Fulfills the historical perspective requirement. Mr. Ropp/Offered every other year

084 JAPANESE CIVILIZATION/ LECTURE, DISCUSSION

Selected themes in contemporary and historical Japan. Fulfills the historical perspective requirement. Staff/Offered periodically

090 SURVEY OF TWENTIETH-CENTURY GLOBAL HISTORY/ LECTURE, DISCUSSION

Starting with an assessment of the world in 1900, the course gives historical background to the contemporary global order. It helps students view their lives within a worldwide perspective in terms of politics, economics, and culture. Each year, particular problems or issues serve as a focus for lectures and discussions. Students write several essays to integrate class reading, lectures, and discussions. Daily reading of the New York Times is required. Fulfills the historical perspective requirement. Mr. Ford/Offered periodically

103 AFRICA AND THE WORLD/ LECTURE, DISCUSSION

The course examines the historical and contemporary relationships between sub–Saharan Africa and the rest of the world, emphasizing the two-way nature of those relationships: Africa's influence on world history and events as well as the influence of the world on Africa. The course looks at Africa's relationships with Europe, the U.S., the Middle East, the Muslim world, and parts of Asia and Latin America, ending with a special focus on South Africa and the world. Fulfills the historical perspective requirement. Formerly titled Hist. 060, Africa and the World. Ms. Grier/Offered every year.

105 GREEKS AND BARBARIANS IN THE ANCIENT ECUMENE/ LECTURE, DISCUSSION

Refer to course description under Geography 174. Mr. Koelsch/Offered every other year

110 IMPERIAL EUROPE/ LECTURE, DISCUSSION

An examination of culture and society in Western Europe in the imperial age (1870-

1914). This course emphasizes the cultural roots of European imperialism and the impact of world power on Europe. Mr. Richardson/ Offered periodically

117 INTRODUCTION TO HEBREW BIBLE I: NARRATIVE AND LAW

Refer to course description under Jewish Studies 117. Mr. Fox/Offered every year

120 WRITING HISTORY/ PROSEMINAR

This seminar introduces students to the discipline of history, with emphasis on the different types of historical writing and on the issues involved in the research and writing of historical studies. In the first half, students read essays in contemporary historiography and examples of historical research in a variety of fields. Attention is paid to the mechanics of historical research, including bibliographical work, the use of libraries and library services, selection of topic and approach, appropriate research techniques in different fields, organization of information, and narrative strategies in writing. In the last half, each student researches and writes an historical study based on primary historical sources in his or her field of choice. Mr. Ropp/Offered every year

124 ETHNICITY AND NATIONALISM IN MODERN EUROPE IN COMPARATIVE PERSPECTIVE/ LECTURE, DISCUSSION

Starting with ethnic divisions in Europe, the course analyzes the strongest political force today—modern nationalism—specifically its appeal and nature as they have changed over the past two centuries. This course fulfills the comparative perspective requirement. Mr. Borg/Offered every year

125 DEVELOPMENT PROBLEMS/ LECTURE, DISCUSSION

Refer to course description under International Development 125. Ms. Thomas-Slayter/Offered every year

145 U.S. HISTORY THROUGH THE NOVEL/LECTURE, DISCUSSION

An introductory course in American history with a distinctive and unconventional approach, resting on the assumption that we can gain access to the past by reading fiction. Students learn how to approach imaginative literature from an historical perspective and to appreciate the historical insight of writers who were keen observers of aspects of the making of modern America. Fulfills the historical perspective requirement. Mr. McCoy/ Offered every year

157 THE AGE OF NERO/ LECTURE, DISCUSSION

Refer to course description under Classics 157. Mr. Burke/Offered every other year

158 MODERN ENGLISH HISTORY/ LECTURE, DISCUSSION

Introduction to the historical development of culture, polity, and society in Great Britain from the mid-nineteenth century to the present. Topics include the rise of industrial society, parliamentary reform, the rise of political parties, the rise of labor, the British Empire, Ireland, women and society, and Africans and Asians in Britain. Mr. Richardson/Offered periodically

161 BRITISH INDIA/ LECTURE, DISCUSSION

Through the study of cultural and historical documents as well as modern historical scholarship, this course studies the nature of British rule in India in terms of the relationship between Indian and British peoples and societies from the seventeenth century to the mid-twentieth century. Mr. Richardson/ Offered periodically

162 THE HISTORY OF THE MODERN MIDDLE EAST/ LECTURE, DISCUSSION

This course focuses on Middle Eastern history and society from World War I to the present. Major themes include the collapse of the Ottoman Empire and the emergence of nation-states, colonial rule in the Arab world and the struggle for independence, the Arab-Israeli conflict, the rise of Islamic fundamentalism, and the impact of oil. Mr. Little/ Offered periodically

168 THE HISTORY OF CAPITALISM/LECTURE, DISCUSSION

This course examines the rise and development of "capitalist" society in Europe and the Americas and its "expansion" around the world from the sixteenth century. Through historiographical debate, we explore sources of capital accumulation and industrialization in England, continental Europe, and the United States. Also examined is globalization of economic relations, the "world capitalist system," and the impact of capitalism on society and culture. Close attention is paid to the theories of capitalist development, such as the classical, Marxist, neo-classical, and the development/underdevelopment school. Mr. Richardson/Offered periodically

174 THE JEWISH EXPERIENCE/ LECTURE, DISCUSSION

A survey of the history of the Jewish community and the development of Judaism from the era of Alexander the Great (c.325 B.C.E.) to the present. This course examines the major political, religious, social, and economic trends of each period as they affected the Jewish community and the development of Judaism. It emphasizes elements of change and continuity as well as the interaction of the Jewish community with the larger culture/community. Fulfills historical perspective requirement. Staff/Offered every year

177 LATIN AMERICAN HISTORY SINCE 1825/LECTURE, DISCUSSION

A survey of Latin American nations from independence to the present, emphasizing the twentieth century. Themes include the persistence of neocolonial social and economic structures, the emergence of nationalist and revolutionary movements after 1900, and U.S.-Latin American relations. Special emphasis on Mexico, Argentina, and Brazil. Fulfills the historical perspective requirement. Mr. Little/Offered periodically

178 SOUTH AFRICA: HISTORY AND CONTEMPORARY POLITICS/ LECTURE, DISCUSSION

Refer to course description under Government 178. Formerly titled Hist. 178, Politics and History of South Africa. Ms. Grier/Offered every other year

179 THE HISTORY OF TRADITIONAL AFRICA/LECTURE, DISCUSSION

An introduction to the history of Africa south of the Sahara. The course begins with the early civilizations of Kush, Axum, Ghana, Mali, Songhai, Benin, the Zanj, Congo, and Zimbabwe and continues to the arrival of Europeans. Attention is given to eastern, western, and southern Africa. The approach is historical and anthropological. Fulfills the historical perspective requirement. Staff/Offered every other year

180 HISTORY OF MODERN AFRICA/LECTURE, DISCUSSION

This course introduces students to the major themes of modern African history. It begins with an orientation to precolonial Africa and then considers four main periods: (1) the imperial years, (2) the struggle for independence, (3) the 1960s as a decade of independence, (4) the 1970s and 1980s as a search for identity and development. Focus is on the years since 1945. Fulfills the historical perspective requirement. Staff/Offered every other year

181 TRADITIONAL CHINA/ LECTURE, DISCUSSION

Focuses on Chinese life, institutions, and culture from the earliest times through the mid-nineteenth century. Creative literature, philosophical writings, and selected primary documents supplement information presented in interpretive texts and lectures. Fulfills the historical perspective requirement. Mr. Ropp/ Offered every other year

182 MODERN CHINA/LECTURE, DISCUSSION

Introduces students to events, personalities, and concepts of importance for understanding China's history from the early nineteenth century to the present. Readings that present the Chinese view of events supplement interpretative studies by Western scholars. Fulfills the historical perspective requirement. Mr. Ropp/Offered every other year

184 MODERN JAPAN/ LECTURE, DISCUSSION

A examination of Japanese political, social, economic, diplomatic, and cultural history from approximately 1800 to the present. This course focuses on issues arising in the transition of a non-Western culture from a feudal society to a modern political-economic unit. Staff/Offered every other year

200 AMERICA'S FORMATIVE YEARS/LECTURE, DISCUSSION

The emergence of distinctive forms of culture and society in English North America from the earliest colonial settlements to approximately 1760. A comparative regional approach, with special emphasis on New England (and the theme of Puritanism) and the Chesapeake (and the themes of race, slavery, and freedom). Mr. McCoy/Offered periodically

201 ERA OF THE AMERICAN REVOLUTION/LECTURE, DISCUSSION

The origins, character, and consequences of the American Revolution, from the erosion of imperial authority in the 1760s and 1770s to the Constitutional Convention of 1787. Emphasis is on the relation of ideology and political ideas to social development. Mr. McCoy/Offered every other year

202 THE EARLY AMERICAN REPUBLIC/ LECTURE, DISCUSSION

The formation and testing of the early U.S. from the adoption of the Constitution through the Jacksonian era. Emphasis is on ideology, public policy, and the problem of national integration during an age of extraordinary territorial and economic expansion. Mr. McCoy/Offered periodically

203 SEMINAR IN U.S. URBAN HISTORY: COLONIAL - MODERN PERIOD/SEMINAR, DISCUSSION, RESEARCH

This course examines the urban experience in what is now the U.S. from its multiethnic colonial origins to its multiracial present. Particular attention is paid to the relationship between the organization of space in the city and the social and political organization of the city, from witch-hunts to riots. Ms. Deutsch/Offered periodically

204 INTERPRETATIONS OF AMERICAN HISTORY/PROSEMINAR

A colloquium that takes a broadly conceptual and historiographical approach to the literature in early American history, from the origins of colonization to approximately 1820. Permission of the instructor is required. Mr. McCoy/Offered periodically

205 HISTORY OF THE AMERICAN WEST/LECTURE, DISCUSSION

Cowboys, Indians, and goldminers; farmers, fur traders, railroad workers, and prostitutes; Chinese, Japanese, Mexican, and African Americans; and men and women of the frontier—all became part of the myth and history of the American West and of the nation. From gold and silver to Silicon Valley, from the Hopi to Hollywood, the course examines how the myth and history of the West were shaped by eastern dreams and how, in turn, those dreams were reshaped. Ms. Deutsch/Offered every other year

208 THE U.S., 1900-1945/LECTURE, DISCUSSION

A survey of the U.S. from the progressive era through World War II. The course emphasizes the emergence of modern American culture, the rise of an imperial presidency, and the growth of government intervention in the economy from Teddy Roosevelt to Franklin Roosevelt. Topics include the decline of socialism, the impact of war on American society, and the persistence of racial and ethnic conflict. Mr. Little/Offered every other year

209 THE U.S. SINCE 1945/LECTURE, DISCUSSION

A survey of American political, social, and cultural history from Hiroshima to the 1990s. The course focuses on the rise and fall of an affluent society, the emergence of an imperial foreign policy, and the shift from traditional party politics to a more pluralistic political system. Topics include anticommunism at home and abroad, the impact of the mass media on postwar American culture, the civil rights revolution, the war in Vietnam, and Reaganomics. Mr. Little/Offered every other year

210 RESEARCH SEMINAR IN EARLY AMERICAN HISTORY/RESEARCH SEMINAR

A combination of individual and collective endeavor, this course focuses on mastering the arts of historical research and writing. Each student undertakes a research project on a topic in early American history, defined to include the period through and including the Civil War. Permission of the instructor is required. Mr. McCoy/Offered periodically

211 NATIVE AMERICAN HISTORY THROUGH AUTOBIOGRAPHY/LECTURE, DISCUSSION

One purpose of this course is to begin to explore U.S. history from the perspectives of Native Americans. Several autobiographers from a single group are read to recognize the variety within groups so as not to reduce their individual history to “the” Indian experience.

This is also a course about autobiography and narrative, and about what "history" is. Ms. Deutsch/Offered every other year

212 U.S. URBAN HISTORY/ LECTURE, DISCUSSION

This course examines themes in the social, economic, and cultural development of American urban society from colonial origins to the present. It focuses on the process of urbanization and on the adaptation of various social groups and classes to urban life and to the complexity of urban society. It also examines the transformation of urban neighborhoods and ghettoes, social reform movements in the city, and urban planning. Ms. Deutsch/ Offered periodically

213 GENDER AND THE CITY IN THE U.S./DISCUSSION, RESEARCH

Focusing on the nineteenth and twentieth centuries, the course examines where urban life for men and women diverged and where it met. Readings on men, women, and urban space, reform movements, utopian ideals, and other topics are followed by student research projects using local resources. Ms. Deutsch/ Offered periodically

214 THE AMERICAN CIVIL WAR/LECTURE, DISCUSSION

An examination of the events and trends precipitating the greatest crisis in American history, the Civil War of 1861-65. The course includes consideration of the behavior and experience of Americans during the war itself. Mr. McCoy/Offered every other year

215 THE AGE OF LINCOLN/ PROSEMINAR

A reading, discussion, and research course focusing on an extraordinary individual and his times. Emphasis is placed on biography, and on the relationship between the private and the public in Abraham Lincoln's life, which becomes the vehicle for understanding better the distinctive problems and concerns of American society, culture, and politics from approximately 1815 through the end of the Civil War. Mr. McCoy/Offered every other year

216 AMERICAN HISTORY IN COMPARATIVE PERSPECTIVE/ PROSEMINAR

A reading and discussion course exploring the advantages of taking a comparative approach to selected key themes and issues in the history of the United States. Permission of the instructor is required. Mr. McCoy/Offered periodically

218 U.S. IN THE 1920S AND 1930S/LECTURE, DISCUSSION

From speakeasies to "Happy Days...," from flappers and suffragettes to forgotten men, there are common threads to be seen. These decades abounded with experiments—social, artistic, and technological—and with individuals—Henry Ford, Charles Lindbergh, Franklin and Eleanor Roosevelt, Huey Long—who believed each had the power single-handedly to remake the world. This course traces developments in American popular culture, politics, economics, and society through novels, speeches and other documents, secondary sources, and films. Ms. Deutsch/Offered periodically

219 HISTORY OF AMERICAN WOMEN/LECTURE, DISCUSSION

This course examines the female experience in the United States, focusing on issues of power, race, ethnicity, and class, as well as on concepts of work, family, and gender, with their ramifications for the world of both sexes. Fulfills the historical perspective requirement. Ms. Deutsch/Offered every year

220 WORCESTER HISTORICAL MUSEUM/PUBLIC HISTORY/ RESEARCH SEMINAR

Students research a paper focusing on an aspect of local history. Themes for the course change annually. In 1992-93, for example, students focused on the history of Worcester's black community. The research generated in this course is used as the basis of an exhibit at the Worcester Historical Museum. Ms. Greenwood/Offered every year.

221 AFRICAN-AMERICAN HISTORY/LECTURE, DISCUSSION

Examines the historical experience of blacks in America from the colonial period to the present. Among the topics explored are the evolution of slavery, changing conceptions of race, blacks in the Civil War and Reconstruction, the Great Migration, and the Civil Rights Movement. Fulfills the historical perspective requirement. Ms. Greenwood/ Offered every other year.

222 HISTORY OF THE SOUTH/ LECTURE, DISCUSSION

This course explores the history of the South from the colonial period to the present, focusing on how the South developed as a distinctive region of the United States. Among the themes examined in this course are the development of slavery; the impact of slavery on the economy, politics, and culture of the South; race, class, and gender in the Old and New South; the myth and reality of the New South; the South in the twentieth century. Ms. Greenwood/Offered every other year.

223 THE CIVIL RIGHTS MOVEMENT/LECTURE, DISCUSSION

This course examines the roots and evolution of the Civil Rights Movement from the 1930s to the present. Topics include civil rights as a grassroots movement; the New Deal, World War II and civil rights; the emergence of Martin Luther King; women and the Civil Rights Movement; black power; the disintegration of the movement; the meaning of civil rights today. Ms. Greenwood/Offered every other year.

224 HISTORY OF AFRICAN-AMERICAN WOMEN/SEMINAR

The course examines the historical experience of African American women from the period of slavery to the present. Attention is paid to black women's role in the economy and in politics, to resistance to racial and sexual oppression, and to the historical relationship to white women's movements. Comparisons are made between black women in the U.S. and black women in the Caribbean and South Africa. Ms. Grier/Offered every year

226 AMERICAN THOUGHT AND CULTURE, 1740-1865/ LECTURE, DISCUSSION

Readings in the formation of an American culture from participants and witnesses, from the Great Awakening to issues of pluralism and cultural variety arising out of urbanization, slavery, and the Civil War. Mr. Koelsch/ Offered every other year

227 AMERICAN THOUGHT AND CULTURE SINCE 1865/ LECTURE, DISCUSSION

Readings from witnesses to shifts in American culture from mid-nineteenth century to the era of multiculturalism. May be taken independently of History 226. Mr. Koelsch/ Offered every other year

229 CLASSICAL TRADITIONS IN MODERN THOUGHT/PROSEMINAR

Readings from the history of classical scholarship and the newer field of "reception studies" illustrate perceptions and uses of the world of classical antiquity in Western and American culture since the Renaissance. Oral reports are paralleled and followed by a substantial paper on a topic of the student's choice. Mr. Koelsch/Offered every other year

231 AMERICA IN THE GILDED AGE, 1877–1900/PROSEMINAR

This course focuses on one of the most volatile periods of American history, the Gilded Age, the period from 1877 to the turn of the century. Through readings and discussions, students examine Gilded Age society, culture, economy, and politics. Topics include immigration and urbanization, industry and labor relations, family life, and agrarian movements. Ms. Greenwood/Offered every other year.

232 AMERICAN VICTORIAN CULTURE/SEMINAR

Selected topics in American cultural history from 1815 to about 1900; methods and sources in cultural history. About half the course is spent in oral reports and discussion of recent "model" or seminal works; the remaining weeks are spent in intensive research and the writing of an article-length paper. Mr. Koelsch/Offered every other year

234 HEALTH AND DISEASE IN THE AMERICAN HABITAT/DISCUSSION

Refer to course description under Geography 234. Mr. Koelsch/Offered every other year

236 THE ARAB STATE SYSTEM/ LECTURE, DISCUSSION

Refer to course description under Government 237. Mr. Vitalis/Offered every other year

237 TOPICS IN U.S. LABOR HISTORY/SEMINAR

This course examines the changing meaning and nature of work and the lives and organizations of workers. Ms. Deutsch/Offered periodically

238 U.S. FOREIGN RELATIONS SINCE 1914/LECTURE, DISCUSSION

Students examine the emergence of the U.S. as a major world power in the twentieth century. The course focuses on the domestic sources of foreign policy and the assumptions of the major policy makers (Wilson through Bush). Themes include the American response to a revolutionary world since 1914, the increasingly dominant role of the president in the making of U.S. foreign policy, and the changing position of the U.S. in the international economy. Mr. Little/Offered every year

239 AMERICAN CONSTITUTIONAL LAW/LECTURE, DISCUSSION

Refer to course description under Government 254. Mr. Miller/Offered periodically

243 AMERICAN ANTIQUARIAN SOCIETY SEMINAR IN AMERICAN STUDIES/SEMINAR

Given at the American Antiquarian Society (about two miles from Clark), the course affords students an opportunity to do original research in the society's unique holdings. Students apply in the spring through Professor McCoy. American Antiquarian Society Staff/Offered every year

245 U.S. FOREIGN POLICY: MIDDLE EAST/LECTURE, DISCUSSION

Refer to course description under Government 245. Mr. Lane/Offered periodically

246 HISTORY OF AMERICAN HIGHER EDUCATION/SEMINAR

Oral reports and discussion of recent work on the role of higher education in American culture from colonial times to the twentieth century, followed by intensive work on a major term paper. Mr. Koelsch/Offered every other year

248 TOPICS IN AMERICAN SOCIAL HISTORY/SEMINAR

This seminar is an introduction to important works and major issues in American social history, with particular emphasis on the transformation of work and working class life, the growth of cities and their culture(s), the African-American experience, and the history of sexuality. Students occasionally lead class discussions and write a historiographical essay on a topic in American social history. Permission of instructor required. Ms. Deutsch/Offered periodically

249 RESEARCH SEMINAR IN AMERICAN SOCIAL HISTORY/ RESEARCH SEMINAR

Every student undertakes an intensive research project culminating in an article-length essay. Research generally builds on readings done in History 248, but students who have not taken 248 may ask the instructor for permission to take 249. This course requires the permission of the instructor. Ms. Deutsch/Offered periodically

250 THE FORMATION OF THE MODERN STATE: GROUP CONSCIOUSNESS, INDIVIDUALISM, AND SOCIAL ORGANIZATION IN "OLD EUROPE," 1550-1789/LECTURE, DISCUSSION

An examination of pre-French Revolutionary Europe as a corporative and customary political culture. This course studies how that culture was altered by militarism, absolutism, mercantilism, early capitalism, modern science, and the requirements of the international system of European states. Students gain an appreciation of the social and ideological legacies of the old regime in our own time. Fulfills the historical perspective requirement. Mr. Lucas/Offered every other year

251 THE COMPARATIVE STUDY OF REVOLUTIONS: THE FRENCH REVOLUTION OF 1789 AND THE BEGINNINGS OF MODERN REVOLUTIONS/LECTURE, DISCUSSION

Analysis of old and new ideas of revolution, including ritual, resistance, reactionary restoration vs. innovation; the "democratic" revolution; the psychology, sociology, and social psychology of revolutionary behavior; religion and revolution; violence; and the relevance of the French Revolution to twentieth-century issues. Fulfills the comparative perspective requirement. Mr. Lucas/Offered every other year

252 NINETEENTH-CENTURY EUROPE/LECTURE, DISCUSSION

Centers on the problems and dilemmas of European political societies as they responded to the tug of modernity during the century of European preeminence throughout the world. Mr. Borg/Offered every other year

253 TWENTIETH-CENTURY EUROPE/LECTURE, DISCUSSION

Concentrates on the characteristic problems of Europe in a century of war, economic convulsion, and political instability. Mr. Borg/ Offered every year

254 EMPIRE AND RACE IN BRITISH HISTORY/PROSEMINAR

This course explores the British encounter with non-"white" people in the outside world, and in Britain itself, in the context of changing British views on empire and imperialism. Its focus is on British involvement with Africans and Asians from the eighteenth to the mid-twentieth century. The course is concerned with understanding how this experience contributed to the historical construction of a British national identity and a masculine ideal. Mr. Richardson/Offered periodically

255 GLOBAL RELATIONS: TWENTIETH CENTURY/ LECTURE, DISCUSSION

This is an advanced reading course on the nature of global relations in the twentieth century. The aim is to gain a comprehensive and critical introduction to the different ways of conceptualizing those relations. Mr. Richardson/Offered periodically

256 POLITICS OF THE SOVIET UNION AND ITS SUCCESSOR STATES/LECTURE, DISCUSSION

Refer to course description under Government 256. Ms. Sochor/Offered every year

257 EUROPE SINCE 1945/ PROSEMINAR

Readings and discussions in modern Europe since World War II. Students choose their readings according to their own historical interests. Mr. Borg/ Offered every year

258 ENGLAND'S OLD REGIME/ LECTURE, DISCUSSION

Examines the formation of the peculiarities of the English "character," state, society, religions, and the world's first modern industrial economy, 1500-1850. To help students grasp these peculiarities, a special emphasis is placed on comparisons of England's experience with continental Europe's and on the use of historical psychology. Fulfills the historical perspective requirement. Formerly titled Towards Modern England. Mr. Lucas/Offered every other year

259 MODERN GERMANY/ LECTURE, DISCUSSION

An examination of the convulsive course of German history over the past century: unification under Bismarck, the Second Empire, the First World War, the Weimar Republic, the Third Reich, the Second World War, divided postwar Germany, and reunification. Fulfills the historical perspective requirement. Mr. Borg/Offered every other year

260 NATIONALISM AND GLOBAL INTERDEPENDENCE/SEMINAR

This course examines the use of an increasingly interdependent world and the parallel phenomenon of resurgent nationalism. It studies the growth of a transnational culture in the context of contrary forces emphasizing local identities and commitments. We question the possibility of creating institutional structures capable of dealing with these dual forces in a manner both equitable and effective in securing development and peace on a world scale. Mr. Richardson/Offered periodically

262 JEWS AND CHRISTIANS IN THE ANCIENT WORLD

Refer to course description under Classics 262. Mr. Burke/Offered every other year

263 ASIANS AND AFRICANS IN EUROPEAN HISTORY/LECTURE, DISCUSSION

This course investigates how European culture affected the European experience with Africans and Indians, as well as the impact of that experience on European culture in the period from the Enlightenment to the twentieth century. It includes the study of thinkers such as John Locke, Charles Darwin, and Joseph Conrad, whose ideas allow access to the racial thought worlds of their societies; works on European racial attitudes such as Philip Curtin's The Image of Africa; and selections from African and Asian critics of European culture and rule like Edward Wilmot Blyden and Mahatma Gandhi. Formerly titled Africans and Asians in European History. Mr. Richardson/Offered periodically

266 HISTORICAL IDENTITIES/SEMINAR

This course explores how societies have created and maintained unifying myths of identity through time. We are particularly concerned with how such myths and the process of myth making have been affected by intercultural relations. Mr. Richardson/Offered periodically

268 FOREIGNERS PERCEIVED: INTERCULTURAL RELATIONS THROUGH TRAVEL WRITINGS/PROSEMINAR

An exploration through travel writings of the ways that peoples conceptualize the foreign. Issues include the ways by which intellectual boundaries are established between societies, the meaning and import of the categories created by those boundaries, the mutual dependence on those notions, and the ways that such categories affect relations among different cultures. Staff/Offered periodically

269 AFRICAN CRISIS/SEMINAR

This course will focus on the interface among political, economic, ecological, and development variables in Africa's current crisis. It assumes that there are major dilemmas at national levels that do not have solutions, given the present set of assumptions about economic development. On the other hand, there are many locally based and historically proven management strategies that offer promises to lessen some of the ecological and political problems that face Africa. Each year, case examples will be drawn from different country and regional examples. Mr. Ford/Offered periodically

271 IN SEARCH OF HUMANITY: EIGHTEENTH-CENTURY EUROPEAN VALUES/LECTURE, DISCUSSION

Examines the Enlightenment and its heirs and critics: the scientific revolution, philosophical reformism, and early conservative romanticism. Emphasis is on rival perceptions of man's psychological and social nature, history, and aesthetic and religious sensibilities as seen through great secondary treatments of the Enlightenment (which also introduce the student to approaches to intellectual history). Original sources include Hume, Beccaria, Rousseau, Condorcet, Kant, Burke, Savigny. Fulfills the values perspective requirement. Mr. Lucas/Offered every other year

272 IN SEARCH OF HUMANITY: NINETEENTH-CENTURY EUROPEAN VALUES/LECTURE, DISCUSSION

Examines the elaboration of the Enlightenment by its heirs and critics. Emphasis is same as in 271, but focus shifts to an analysis of political and economic liberalism, social Darwinism, racism, and "utopian" socialism in England and France, followed by an analysis of nationalism, Marxism, positivism, old and new conservatisms, and the reassessment of the values and progress of European civilization among principally Italian and German thinkers. Fulfills the values perspective requirement. Mr. Lucas/ Offered every other year

273 MODERN EUROPEAN CULTURE/LECTURE, DISCUSSION

Introduction to the study of European cultural/intellectual history (late nineteenth century and twentieth century) through investigation of seminal topics such as evolutionary thought, classical social and economic theory, the self, modernism, gender, and race. Sources include literature, theory, art, film, and modern historical work. Mr. Richardson/Offered every year

274 BLACK LIBERATION CONSCIOUSNESS/LECTURE, DISCUSSION

This course examines theories and notions of black liberation in what the scholar Paul Gilroy has called the "Black Atlantic." The time frame is the late nineteenth through the late twentieth centuries. We study activist intellectuals based in West Africa, Britain, the Caribbean and North America, who understood their work as attempts to foundation a practice of black liberation. The course includes such figures as C.L.R. James, George Padmore, W.E.B. DuBois, among others. Mr. Richardson/Offered periodically

275 BLACK LIVES/SEMINAR

This is a seminar in the life-history of men and women in the African diaspora in the West. By looking at the life and work of people such as Malcolm X, W.E.B. DuBois, Richard Wright and Franz Fanan, we explore the notion of "double consciousness" or the phenomenon of being both "black" and western—part of the wider culture of Europe and America and yet separated from it by what DuBois called a veil. Mr. Richardson/Offered periodically

276 MODERN JEWISH HISTORY AND THOUGHT /LECTURE, DISCUSSION

Discusses the emergence of the Jew into modern society after the French Revolution. The political and ideological struggle over emancipation and adjustment are traced through the growth of Jewish denominationalism in Western Europe. The competing ideologies of Jewish nationalism (including those of both Zionist and non-Zionist character) are discussed in the context of Eastern European Jewry and its unique contribution to modern Jewish identity. Course concludes with an examination of the Weimar Republic in Germany (1918-1933) and the independent Polish State (1918-1939). Staff/Offered every other year

277 THE HISTORY OF ZIONISM IN ISRAEL/SEMINAR

Refer to course description under Jewish Studies 277. Staff/Offered periodically

278 THE HOLOCAUST: A STUDY OF GENOCIDE/LECTURE, DISCUSSION

Refer to course description under Sociology 204. Ms. Tenenbaum/Offered every year

280 SOVIET FOREIGN POLICY AND ITS AFTERMATH/ LECTURE, DISCUSSION

Refer to course description under Government 280. Ms. Sochor/Offered every other year

281 THE PEOPLE'S REPUBLIC OF CHINA/LECTURE, DISCUSSION

A general survey of life in the People's Republic of China from 1949 to the present. This course includes a history of the People's Republic, and attention to such themes as politics, society, family life, economics, foreign relations, literature, and the arts. Mr. Ropp/Offered every other year

282 CHINESE WOMEN IN LITERATURE AND SOCIETY/ LECTURE, DISCUSSION

Examines the changing role of women in Chinese society from the seventeenth century to the present, primarily through the reading and discussion of Chinese literature in English translation. Mr. Ropp/Offered every other year

283 JAPANESE CULTURE AND ECONOMIC DEVELOPMENT/ LECTURE, DISCUSSION

A study of the relationship between Japanese culture and the economic development of Japan from the fifteenth century to the present. Emphasis is placed on the evolution of economic institutions and business practices within the context of Japanese culture. Ms. Aoki/Offered periodically

284 JAPAN SINCE WORLD WAR II/LECTURE, DISCUSSION

Offers an overview of Japanese history and culture in the forty-five years since World War II and an exploration of key areas of contemporary Japanese society. Readings focus on topics such as: the Japanese "economic miracle," interpersonal relations, the changing roles of women in Japan, challenges to traditional values in post-war fiction, urban and rural social structure, political power and policy making Japanese government. Staff/Offered periodically

285 JAPANESE FOLKLORE/ PROSEMINAR

The history of Japan as conceived, interpreted, and contested in historical writing and in popular memory, including folklore and popular literature. Ms. Aoki/Offered periodically

286 THE VIETNAM WAR/ LECTURE, DISCUSSION

This course explores the Vietnam War, with emphasis on American involvement in Vietnam in the decade 1965 to 1975. Includes a survey of the history and culture of Vietnam, the French experience in Vietnam, and American involvement with Vietnam from World War II to the present. In covering the war, equal attention is paid to Vietnamese and American goals, strategies and tactics. The final part of the course deals with the legacies of the Vietnam War, including the impact on the U.S. and Vietnam, and the lessons drawn on both sides. Mr. Ropp/ Offered every other year

288 SEMINAR IN CHINESE HISTORY/SEMINAR

Topical research seminar in Chinese history for those with a concentration in Asian

Studies. Prerequisite: Asian Studies 080 or 181 or 182, or by permission. Mr. Ropp/ Offered periodically

289 JAPANESE THOUGHT/ PROSEMINAR

An inquiry into different strands of thought that have surfaced throughout Japanese history. Prerequisite: History 080 or 084, or by permission of instructor. Ms. Aoki /Offered periodically

290 DEVELOPMENT PROJECT MANAGEMENT/SEMINAR

Refer to course description under International Development 290. Mr. Ford/ Offered every year

291 ADVANCED TOPICS IN INTERNATIONAL RELATIONS/ SEMINAR

Content of this course varies with the interests of the instructor. Possible topics include issues in international development, multinational corporations, the new international economic order, or issues in U.S. foreign policy. The course is for advanced students concentrating in international relations. Other students may be admitted by permission of the instructor. Mr. Little/Offered every year

292 WOMEN MIRRORED IN EAST AND WEST/SEMINAR

Refer to course description under English 292. Ms. Gertz and Mr. Ropp/Offered every other year

293 SEMINAR ON BIOGRAPHY/SEMINAR

Through readings and discussions, the seminar investigates the relationship between select "great" personalities of the twentieth century and history. We consider the role of personality in "shaping" events, modern notions of the self, and the mythic functions of the "great" personality. Formerly titled History and Personality. Mr. Richardson/ Offered periodically

294 TWENTIETH-CENTURY WESTERN CULTURE/PROSEMINAR

A study of aspects of culture and thought in the twentieth-century West. Topics covered include modernism, psychoanalysis and behavioral science, structuralism, deconstruction, feminism, race, and popular culture. Mr. Richardson /Offered periodically

295 CAPSTONE/PROSEMINAR, DISCUSSION

Readings and discussions in the history of the idea of history from Thucydides to the present. Mr. Borg, Staff/Offered every year

296 MODES OF INTERPRETATION/SEMINAR

Refer to course description under History 396. Ms. Deutsch/Offered periodically

299 SEC.1 DIRECTED READINGS/TUTORIAL

Undergraduates, normally juniors and seniors, design a directed readings course consisting of a sequence of structured readings on a topic approved and supervised by an instructor. Prerequisite: permission of instructor. Offered for variable credit. Staff

299 SEC.2 RESEARCH PROJECTS/TUTORIAL

Undergraduates, normally juniors and seniors, construct an independent research course with an instructor of their choosing. Prerequisite: permission of instructor. Offered for variable credit. Staff

DEPARTMENTAL HONORS

299 SEC.8 HONORS THESIS RESEARCH

Honors students receive up to two credits for thesis research. Honors students preparing for the comprehensive exam receive credit for their reading under History 299. Offered for variable credit. Staff/Offered every year

299 SEC.9 INTERNSHIP

Students who undertake an interdisciplinary internship for more than two credits may receive up to two credits in history and the remainder in another department. Prerequisite: permission of instructor and of chair. Offered for variable credit. Staff

GRADUATE COURSES

300 READINGS IN AMERICAN COLONIAL HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Mr. McCoy

301 STUDIES IN THE AGE OF THE AMERICAN REVOLUTION/TUTORIAL

Independent studies. Offered for variable credit. Mr. McCoy

303 SEMINAR IN U.S. URBAN HISTORY/SEMINAR

Refer to course description under History 203. Ms. Deutsch/Offered periodically

304 INTERPRETATIONS OF AMERICAN HISTORY/PROSEMINAR

Refer to course description under History 204. Mr. McCoy/Offered periodically

310 RESEARCH SEMINAR IN EARLY AMERICAN HISTORY/RESEARCH SEMINAR

Refer to course description under History 210. Mr. McCoy/Offered periodically

313 GENDER AND THE CITY IN THE U.S./DISCUSSION, RESEARCH

Refer to course description under History 213. Ms. Deutsch/Offered periodically

315 STUDIES IN ECONOMIC HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Staff

332 AMERICAN VICTORIAN CULTURE/SEMINAR

Refer to course description under History 232. Mr. Koelsch/Offered every other year

333 ADVANCED TOPICS IN U.S. WOMEN'S HISTORY/ SEMINAR, DISCUSSION, READINGS

An advanced readings course in women's history, looking at major new works and theoretical issues. Ms. Deutsch/Offered every other year

334 ADVANCED TOPICS IN U.S. WOMEN'S HISTORY/ RESEARCH SEMINAR

An advanced research seminar for topics in U.S. women's history. Ms. Deutsch/Offered every other year

335 STUDIES IN NINETEENTH-CENTURY U.S. HISTORY/ TUTORIAL

Independent studies. Offered for variable credit. Mr. McCoy

337 STUDIES IN DIPLOMATIC HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Mr. Little

341 STUDIES IN AMERICAN THOUGHT AND CULTURE/ TUTORIAL

Independent studies. Offered for variable credit. Mr. Koelsch, Staff

344 STUDIES IN RECENT AMERICAN HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Mr. Little, Staff

345 AFRICAN-AMERICAN HISTORY/SEMINAR, READINGS, DISCUSSION

Intensive readings and discussion of literature of African-American history. Ms. Greenwood/ Offered periodically

346 AFRICAN-AMERICAN HISTORY/RESEARCH SEMINAR

Research seminar on topics in African-American history. Hist. 345 is a prerequisite for this course. Ms. Greenwood/Offered periodically.

348 TOPICS IN AMERICAN SOCIAL HISTORY/SEMINAR

Refer to course description under History 248. Ms. Deutsch/Offered periodically

349 RESEARCH SEMINAR IN AMERICAN SOCIAL HISTORY/RESEARCH SEMINAR

Refer to course description under History 249. Ms. Deutsch/Offered periodically

350 STUDIES IN EARLY MODERN EUROPEAN HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Mr. Lucas

351 STUDIES IN EUROPEAN INTELLECTUAL HISTORY/ TUTORIAL

Independent studies. Offered for variable credit. Papers and discussion. Mr. Lucas or Mr. Richardson

352 STUDIES IN MODERN EUROPEAN HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Mr. Borg

353 STUDIES IN MODERN BRITISH HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Mr. Richardson

354 STUDIES IN MODERN CULTURAL/INTELLECTUAL HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Mr. Richardson

355 STUDIES ON IMPERIALISM/TUTORIAL

Independent studies. Offered for variable credit. Mr. Richardson

380 STUDIES IN AFRICAN HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Mr. Ford

383 STUDIES IN CHINESE HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Mr. Ropp

384 STUDIES IN JAPANESE HISTORY/TUTORIAL

Independent studies. Offered for variable credit. Staff

391 ADVANCED TOPICS IN INTERNATIONAL RELATIONS/ SEMINAR

Refer to description under History 291. Mr. Little/Offered every year

395 PRACTICUM IN THE TEACHING OF HISTORY

Offered for variable credit. Mr. Ford, Staff

396 MODES OF INTERPRETATION/SEMINAR

This course explores new frontiers of historical methods. It also serves as an introduction to theory, concentrating on understanding new approaches to texts and theories of causation, change, and persistence which, though they emerge from a variety of disciplines, affect all fields of history. Ms. Deutsch/offered periodically

399 GRADUATE READINGS

Offered for variable credit. Staff

International Development and Social Change

■ PROGRAM FACULTY

Barbara P. Thomas-Slayter, Ph.D., director, International Development Program: local institutions and organizations, women and public policy, peasant-state relations, gender issues

Richard B. Ford, Ph.D., director, International Development Research: African history, resource management, participation, sustainable development

Ann Seidman, Ph.D.: regional economics, African development, project analysis, development theory, role of state in development process

■ ADJUNCT FACULTY

Hussein Adam, Ph.D.: African politics, political theory, nongovernmental organization

Robert Bradbury, Ph.D.: health planning, health systems analysis, health administration

James A. Delle, Ph.D.: anthropology, political economy of the Caribbean, issues of race, class, gender and ethnicity.

J. Ronald Eastman, Ph.D.: cartography, geographic information systems

Jacque L. Emel, Ph.D.: resource/environmental geography, feminist theory

Cynthia Enloe, Ph.D.: women and politics, militarization, Asian politics, British politics, ethnic and racial politics

Beverly C. Grier, Ph.D.: African politics, international development, women's studies, and U.S. black politics

Robert C. Hsu, Ph.D.: economic development, comparative economic systems, Chinese and Japanese economics, international economics

Douglas L. Johnson, Ph.D.: cultural ecology, arid lands management

Gerald J. Karaska, Ph.D.: urban/economic geography, regional development

Roger Kasperson, Ph.D.: hazards, global change, environment and society

Dorothy Kaufmann, Ph.D.: language and culture in the French-speaking world

David Kummer, Ph.D.: tropical forestry and agriculture, Asian development

Laurence A. Lewis, Ph.D.: geomorphology, tropical agriculture, land degradation

Robert Cameron Mitchell, Ph.D.: environment and society, risk perception, survey research methodology

Richard Peet, Ph.D.: political economy of development, social theory, geography of consciousness

Frank Puffer, Ph.D.: regional economics, African economic development, health economics

Dianne Rocheleau, Ph.D.: cultural/political/systems ecology, gender, forestry and agriculture, environment/development

Paul S. Ropp, Ph.D.: Asian history, comparative history

Harry Schwarz, B.C.E., P.E.: resource management, water resources, environmental impact of development

Zenovia A. Sochor, Ph.D.: Soviet Union and its successor states, comparative politics, foreign policy

Henry J. Steward, Ph.D.: cartography, history of cartography, remote sensing

B.L. Turner II, Ph.D.: cultural/human ecology, global change, Third World agriculture

Robert Vitalis, Ph.D.: international political economy, politics of the Middle East

■ PROGRAM

International Development and Social Change (I.D.) is an interdisciplinary program with teaching, training, and research components. It offers the M.A. degree, a B.A. major, and an accelerated five-year B.A./M.A. program. I.D. was founded in the mid-1970s as a cross-disciplinary effort among the Graduate School of Geography; the Environmental Affairs Program; and the Departments of Government, Economics, and History. Subsequently this interdisciplinary approach has been enhanced by the incorporation of anthropology, and programmatic collaboration with the Graduate School of Management and the establishment of the George Perkins Marsh Institute.

The teaching program is designed to introduce students to the complex issues involved in international development, acquaint them with a range of research activities, and prepare them for careers and participation in international fields. It attempts to orient majors to the changing world in which we live and to the increasing role developing societies play in the interdependence of the world's social, economic, and political systems. The program offers nonmajors an opportunity to participate in its courses, seminars, or other international development activities. Undergraduates are encouraged to work out a double major with I.D. and one of the cooperating departments.

Majors are expected to acquire basic skills of economic and social analysis as well as a generalized orientation toward development and social change. These skills and attitudes are useful for any number of careers in either the private or the public sector that deal with developing areas of the world and relations between North and South. They are also relevant to further graduate study and specialization. To attain these skills, students in the program work in a combined graduate-undergraduate setting, which blends the breadth of liberal arts with the specialization of professional training. Thus, the curriculum includes existing departmental courses, new cross-disciplinary courses, and applied research. Students also participate in seminars, symposia, internships, and summer research activities.

The research program offers faculty and students opportunities to work individually and cooperatively on topics of concern related to international development and social change. Recent research projects have included:

- analyzing agro-forestry and resettlement patterns in Costa Rica
- assessing household and community responses to resource problems in Kenya
- investigating gender roles in semi-arid, marginalized communities in Southern Honduras
- developing a plan to use geographic information systems in assessing land use problems on the perimeter of Nakuru National Park in Kenya
- analyzing gender roles in a Nepalese village changing from subsistence agriculture to livestock and milk production for the market
- carrying out land use planning in a participatory framework in Madagascar
- conducting participatory rural appraisals for community mobilization and planning in Botswana

In all our research, we are concerned not only with the relationship among technological intervention, finite resources, and social change in the developing world, but also with relationships between poor and more affluent nations. We also emphasize collaborative research with other institutions.

The Program for International Development and Social Change is flexible, permitting students to participate in designing their own interdisciplinary curriculum for the study of development problems. It aims to meet the needs of three different groups of students:

First, it is one of the few programs in the United States that offers a liberal arts B.A. degree focused on development. Students may major in international development or they may take international development as a double major in conjunction with a related discipline such as geography, economics, government, or sociology.

Second, it provides an opportunity for undergraduates qualified to go on in the program to complete a five-year B.A./M.A. degree with a view to a career in the development field.

Third, it provides a self-contained program for students coming from other universities who want to obtain the necessary background and complete an M.A. in order to pursue a career in the development field.

■ UNDERGRADUATE PROGRAM

Undergraduates majoring in international development are expected to:

1. attain an understanding of the development process and its political, economic, historical, theoretical, institutional and ecological aspects
2. master basic skills including quantitative skills and techniques of economic and social analysis, and are strongly encouraged to develop competence in a foreign language
3. develop an investigative/research approach to an actual problem and attempt to apply the growing body of theoretical knowledge in an internship experience
4. pursue a career track—for example, resource management or gender and devel-

opment—chosen in consultation with a faculty advisor.

Course Requirements for Majors

1. *Basic orientation:* Majors must take the introductory course I.D. 125, Development Problems; a course in development economics or economic case studies; three additional core courses in politics, resource management, and sociocultural issues; and Economics 010 and 011, Issues and Perspectives and Principles of Economics. Students transferring from other majors or universities may substitute equivalent courses.
2. *Area of specialization:* Majors will take at least four courses in an area of specialization they select in consultation with an I.D. faculty advisor. Students may follow the pattern set out in one of several established tracks—for example, resource management, rural development, anthropology, ethnicity and nationality, or women and development. A student may prefer to design a course sequence, subject to approval by an appropriate faculty member, that creates a new focus. In every case, the area of concentration should be looked upon as an opportunity for students to link their interest in development with a focus in a specialized field.
3. *Skill courses:* Majors must take a course in social sciences research methods and two courses from the following: computer science, statistics, or cartography. They are also encouraged, in consultation with a faculty advisor, to develop a language proficiency relevant to their chosen development area.

■ MASTER'S PROGRAM

The Master's Program in International Development affords the graduate student the opportunity to work closely with faculty members from a broad range of disciplines. The program allows the student a large degree of flexibility in terms of thesis research while emphasizing a core of required classes designed to develop the student's quantitative, analytical, and research skills. All I.D. graduate students must take a course in each of the following areas: development theory, project analysis and management, and research methods. Class work or demonstrated competence is also required in two of the following skills: statistics, geographic information systems, computer science, remote sensing, or language relevant to a student's field work at an intermediate level of proficiency. A minimum of eight course units is necessary for the M.A. degree. There are also opportunities for internships with development agencies in the United States, and the program facilitates opportunities for students to have internships overseas.

Students are encouraged to develop their own fields of specialization in preparation for thesis research, which should be undertaken in the second year of study. Specializations that have been selected by graduate students include women and development, resource management, development theory, rural development, international political economy, household economic behavior, local organization and participation, public health, credit and small enterprise, and comparative ethnic relations. The thesis is normally completed in the third or fourth semester and may include field research.

Graduate students often seek research opportunities, such as Fulbright fellowships, or internship opportunities, such as those offered by Catholic Relief Services or the Ford Foundation, in which they can carry out thesis research. Application deadline: February 1 for following September.

JOINT MA IN RURAL PLANNING

In collaboration with the Development Study Center (Rehovot, Israel), Clark offers a joint MA in rural planning. Students take a semester each at DSC and Clark and write a thesis based on field research. The program is designed for development practitioners in rural regional planning and resources management.

MA IN GEOGRAPHIC INFORMATION SYSTEMS FOR INTERNATIONAL DEVELOPMENT

The International Development Program and the Graduate School of Geography offer a new track within the existing ID MA degree for a specialization in Geographic Information Systems for International Development. The degree is designed as a 12-month program for early and mid-career professionals with responsibilities in mapping, environmental database development, resource management, planning, and policy implementation and monitoring. The 12-month time frame is designed to enable professionals to take a one-year leave of absence to complete the degree. The program is technically oriented with an emphasis on the development of the higher-level skills required of the practicing GIS analyst.

CERTIFICATE PROGRAM

The International Development Program offers the Certificate Program in Gender, Resource Management, and Development in the fall term, and Participation, Resources and Development in the spring term. Both provide mid-career development professionals opportunities to gain the theoretical base and applied skills for analyzing these topics in the context of sustainable development objectives.

COURSES

016 INTRODUCTION TO INTERNATIONAL ECONOMIES/LECTURE

Using a global systems approach, this course surveys the pre-capitalist world, outlines the historical emergence of the world capitalist system, and examines the linked processes of development and under development. It then surveys, critical features of the contemporary world such as multinational corporations, Fordism, post-Fordism and changing regional systems, environmental problems and the emergence of global consciousness. Mr. Peet/ Offered every year

050 LOCAL ACTION GLOBAL CHANGE/LECTURE, DISCUSSION

Brings a global perspective to critical issues, cutting across regions, cultures, and nations at the end of the twentieth century. Each semester the class examines five topics, including: 1)homelessness and what it means to be homeless in New York, L.A., Rio, Khartoum, or Moscow; 2) family planning/spacing and access to birth control technologies—whether in rural Africa, Japan, or Ireland, and including the dilemmas surrounding abortion in the United States; 3) religious fundamentalism and all it portends for societies as diverse as Iraq, India, or the U.S.; 4) AIDS and how we deal with it in Worcester, New York, or Tanzania; 5) tribalism vs. globalism—the disparate inclinations of our world today as we surge toward both global cultural conformity and ethnic and cultural diversity. Our focus is to understand the complexities of these issues in the context of International Development and to decide where we individually and as a community can "act" in regard to "a world at risk." Mr. Ford and Ms. Thomas-Slayter/ Offered every year

069 INTRODUCTION TO INTERNATIONAL RELATIONS/ LECTURE, DISCUSSION

Refer to course description under Government 069. Mr. Vitalis/Offered every year

090 SURVEY OF TWENTIETH-CENTURY GLOBAL HISTORY/ LECTURE, DISCUSSION

Starting with a brief assessment of the world in 1900, the course offers historical background to the contemporary global order. It helps students view their lives within a worldwide perspective in terms of politics, economics, and culture. Each year, particular problems or issues serve as a focus for lectures and discussions. Students write several essays to integrate class reading, lectures, and discussions. Daily reading of the New York Times is required. Fulfills the historical perspective requirement. Mr. Ford/Offered every year

103 AFRICA AND THE WORLD/ LECTURE, DISCUSSION

The course examines the historical and contemporary relationships between sub-Saharan Africa and the rest of the world, emphasizing the two-way nature of the relationships: Africa's influence on world history and events as well as the influence of the world on Africa. The course looks specifically at Africa's relationships with Europe, the U.S., the Middle East, the Muslim world, and parts of Asia and Latin America, ending with a special focus on South Africa and the world. Fulfills the historical perspective requirement. Ms. Grier/Offered every other year

108 WORLD POPULATION/LECTURE

Is the population of our world growing too fast? Will overpopulation lead to doomsday? To address these questions requires an understanding of the nature of population growth and sociocultural responses to it. This course develops an understanding of this relationship through a mix of demography and population geography. World patterns of population distribution, history, and dynamics are explored, and the future of population problems is addressed. Mr. Turner, Mr. Johnson/Offered periodically

113 VILLAGES IN THE THIRD WORLD/LECTURE, DISCUSSION

The course explores the nature of village life in Asia, Africa, and Latin America. Readings are both anthropological and historical with several novels used to enliven the readings and class discussions. Mr. Ford/Offered every other year

117 REVOLUTION AND POLITICAL VIOLENCE/LECTURE, DISCUSSION

This course analyzes the concept, the causes, and the process of revolution. The course explores the distinctions between revolution and other forms of political violence such as terrorism, rebellion, and coups. It also reviews general theories of revolution in order to gain some appreciation of the difficulties, peculiarities, and goals of specific revolutionary movements. The course focuses on the Russian and Chinese revolutions as twentieth-century prototypes; it then draws comparisons to recent revolutions in Eastern Europe, the Middle East, and Latin America. Ms. Sochor/Offered every year

118 FRESHMAN SEMINAR: AFRICA THROUGH LITERATURE/FIRST-YEAR SEMINAR

This seminar explores some of the twentieth-century literature of Africa in order to gain an appreciation of its richness and to understand more fully the changes which have been taking place on that continent. The works selected focus around several themes: the impact of colonialism on African societies, the hopes and disillusionment surrounding the struggle for and achievement of independence; the changing lives of African women; and the complexities of race and class in the liberation struggles of black South Africans. Ms. Thomas-Slayter/Offered periodically

120 INTRODUCTION TO SOCIAL ANTHROPOLOGY/ LECTURE, DISCUSSION

This course provides a broad survey of cultural anthropological theory and methods and introduces students to many ways of life. Designed for first and second-year students of all concentrations, we will employ a problem-based, practical approach to social issues involving culture change, status hierarchies, access to resources, health systems, kinship, conflict, and more. We will use a global perspective for understanding such issues, using knowledge of cultures from Africa, Europe, the Middle East, the Pacific, and the Americas as case studies. No prerequisites are required. Mr. Nixon/Offered every year

125 DEVELOPMENT PROBLEMS/ LECTURE, DISCUSSION

Introduces students to the major issues and debates in the field of international development, by addressing a variety of concerns including colonialism, development and underdevelopment, the relationship between arms expenditures and development, growth and equity issues, trade, aid, the impact of development processes on women, North-South relations, emergence of class, and political ideologies. The class focuses on specific problems of food, population, and resources. Case materials are drawn from a number of countries including India, China, Kenya, Zimbabwe, Mexico, Brazil, and Bangladesh. Ms. Thomas-Slayter/Offered every year

127 POLITICAL ECONOMY OF UNDERDEVELOPMENT/LECTURE

This course critically surveys the leading theories of development (environmental determinism, modernization theory, dependency/ world systems theory, Marxist theories, post-modern analytics) with emphasis on their philosophical and social-theoretical origins. Mr. Peet/Offered every year

128 FAMILY AND SEX ROLES IN CROSS-CULTURAL PERSPECTIVE; AN ANTHROPOLOGICAL APPROACH/LECTURE, DISCUSSION

Examines families and gender roles in cross-cultural perspective, using examples from peoples in Africa, India, China, the Americas, and the Philippines. Topics include kinship and gender in evolutionary perspective, social construction of gender, social reproduction and gender roles, functional and structural analyses of kinship patterns, division of labor, and politics of gender inequality. Students will explore some of the major debates and theoretical positions concerning households, sexuality, gender, and kinship. No prerequisites are required. Mr. Nixon/Offered every year

129 POLITICAL ECONOMY OF INDUSTRIAL COUNTRIES/LECTURE

The advanced capitalist countries are undergoing rapid economic change including an industrial devolution as remarkable as the industrial revolution of the nineteenth century. This course examines the effects of economic change in the United States, Western Europe, Japan, East Asia, and Latin America in the context of theories of global development. Economic and social problems, such as the destruction of employment, unemployment, and regional and community collapse, are emphasized. The course also examines the contradictions of regional economic advance in high technology regions. A survey of regional development policy brings the course to a pragmatic conclusion. Mr. Peet/Offered every other year

136 SUB-SAHARAN AFRICA: ISSUES AND PROBLEMS/ LECTURE, DISCUSSION

Explores issues and problems confronting sub-Saharan Africa, including the legacy of colonialism, establishment of nation-states, changing production systems, the roles of women in existing economic structures, the emergence of class, strategies for socioeconomic change, and regional conflict particularly in the Horn and Southern Africa. Readings include contemporary literature, public documents, journals and newspapers, and secondary sources. Illustrative material is drawn selectively from East, West, and Southern Africa. Ms. Grier/Offered every other year

138 GENDER, SPACE, AND ENVIRONMENT/LECTURE, DISCUSSION

Students explore how gender is reflected in the landscape, in our settlement and land use patterns, in environmental history, and in our present ecological science and practice from the global to the local level. The class will combine lectures, readings, discussions, films, and local field trips. We will review feminist and other alternative explanations of the gendered nature of knowledge, access, use, and control of space and resources in a variety of environments—past, present, and possible. Regional focus on New England. Ms. Rocheleau/Offered every year

139 COUNTRY AND CULTURE/LECTURE

The landscape can be read! Be it a vast tropical rainforest with an occasional clearing or an intensively cultivated river valley in New England, the rural landscape is the product of interaction between place (environment) and people (culture). This course traces the evolution of rural landscapes through time from early hunter-gatherers to modern suburban encroachment on rural areas. Emphasis is placed on ecological principles that help explain the technocultural modification of rural places. Mr. Johnson/ Offered every other year

147 FOOD, POPULATION AND ENVIRONMENT/ LECTURE, DISCUSSION

This course reviews how recurrent food crises have inspired a variety of strategies on the part of national governments and international agencies to alleviate world hunger. The role of private voluntary and charitable agencies is considered from both a positive and negative perspective. Are humans caught in an inevitable Malthusian trap? Or are there methods for resolving the problem of food shortages in the world? A variety of explanations for the origins of, and solutions to, food shortage are reviewed and incorporated into strategies of planning for national food security. Mr. Ford/Offered periodically

158 THE FRENCH-SPEAKING WORLD/LECTURE, DISCUSSION

An interdisciplinary analysis of the problematic role of the French language and the culture it represents in various parts of the world, with emphasis on the Antilles, Algeria, and French-speaking Africa. Through literature, social texts, and film, we explore such issues as bilingual colonialism, the question of negritude, the Algerian war, conflicts between indigenous and French social codes. Prerequisite: two courses at 131 or above, or permission of instructor. Ms. Kaufmann/ Offered every other year

170 ECOLOGY AND ECONOMY OF THIRD WORLD SOCIETIES/ LECTURE, DISCUSSION

Examines a range of peoples in Third World societies focusing on their ecological and economic relations. Our perspective focuses on relations and adaptations at the community level as well as placing such communities in context of international processes associated with the historic creation of the Third World and maintenance of Third World poverty and ecological destruction. Topics include colonialism and neo-colonialism; tribal, urban and peasant peoples in development issues; roles of Third World elites; international trade agreements; and rebellion and indigenous efforts to determine their own cultural, technological, economic, and environmental growth. Case studies include Native South Americans, the Swazi, !Kung and Zulu of Africa, Zapotec of Mexico, Igorot of the Philippines, and more. Some previous study of anthropology, sociology, international development, geography, or social history is highly recommended. Mr. Nixon/Offered every year

174 INTERNATIONAL POLITICAL ECOLOGY/LECTURE, DISCUSSION

Integrates issues of ecology and political economy from local to global scale case studies, starting from a close-up view of people in environmental "hot spots" and following their linkages into the world economy and planetary ecosystems. Students explore the connections between international, environmental, and economic policy and the everyday realities and possible ecological futures of people in environments ranging from the Amazon rainforest to the streets of Worcester, Massachusetts. Offered as a first year seminar and as a lecture course alternate years. Ms. Rocheleau/Offered every year

176 COMPARATIVE ECONOMIC SYSTEMS/LECTURE

Examines the theory and practice of selective cases of capitalism, market socialism, and centrally planned socialism. Major topics include the welfare state and industrial democracy of Sweden, industrial policy and corporate groupings in Japan, workers' self-management in Yugoslavia, problems of centrally planned socialism, and the dilemmas of socialist reforms in Hungary and the Soviet Union. Mr. Hsu/Offered every year

177 JAPANESE AND CHINESE ECONOMIES/LECTURE

A comprehensive survey of the Chinese and Japanese economies—their development, institutions, and policies. Topics include historical background, agricultural development, industrial organization and development, fiscal and monetary policies, employment and labor, Sino-Japanese relations, and relations with the U.S. Mr. Hsu/Offered every other year

178 SOUTH AFRICA: HISTORY AND CONTEMPORARY POLITICS/LECTURE, DISCUSSION

The aim of the course is to acquaint students with the forces that have shaped the political system of contemporary South Africa. The structure of the economy (mining, agriculture, and industry) is examined with particular attention paid to the role of African labor. Dutch and British colonialism, the rise and consolidation of Afrikaner nationalism, the introduction and implementation of apartheid, the struggle of Africans and their allies against apartheid, the role of African women in society and politics, and the nature of politics since the release of Nelson Mandela from prison are among the topics covered. The course also examines South Africa's policies towards neighboring African countries and the economic and political role played by the U.S. in South Africa. Ms. Grier/Offered every year

179 THE HISTORY OF TRADITIONAL AFRICA/LECTURE, DISCUSSION

An introduction to the history of Africa south of the Sahara. The course begins with the early civilizations of Kush, Axum, Ghana, Mali, Songhai, Benin, the Zanj, Congo, and Zimbabwe, and continues through to the arrival of Europeans. Attention is given to eastern, western, and southern Africa. The approach is largely historical and anthropological. Fulfills the historical perspective requirement. Staff/Offered every other year

180 HISTORY OF MODERN AFRICA/LECTURE, DISCUSSION

Introduces students to the major themes of modern African history. Begins with an orientation to precolonial Africa and then considers four main periods: (1) the imperial years, (2) the struggle for independence, (3) the 1960s as a decade of independence, (4) the 1970s and 1980s as a search for identity and development. Focus is primarily on the years since 1945. Fulfills the historical perspective requirement. Staff/Offered every other year

183 MODERN CHINA/ LECTURE, DISCUSSION

Introduces students to events, personalities, and concepts of particular importance for understanding China's history from the early nineteenth century to the present. Readings that present the Chinese view of events are used to supplement interpretative studies by Western scholars. Fulfills the historical perspective requirement. Mr. Ropp/Offered every other year

189 REMOTE SENSING OF THE ENVIRONMENT/ LECTURE, LABORATORY

Offers a broad introduction to one of the most powerful tools now being developed for surveying geographical phenomena. It covers the use of remotely sensed data such as air photos and a variety of satellite imagery to provide answers to many of the problems about our physical and human environment. Mr. Steward/Offered every year

207 POLITICS OF DEVELOPMENT: CENTRAL AMERICA AND SOUTHERN AFRICA/ LECTURE, DISCUSSION

The course examines the theoretical debates surrounding concepts such as development, modernization, underdevelopment, dependency and the Third World. It looks in some detail at the politics in three developing countries selected from sub-Saharan Africa, Asia, Latin America, and the Caribbean. The role of political parties, the bureaucracy, the military, the extremes of wealth and poverty, land distribution, gender, and the impact of global economic and political forces on these countries are examined. Ms. Grier/Offered every year

211 GEOMORPHOLOGY OF HUMID TROPICS/LECTURE, DISCUSSION

The humid tropics—home of rainforest, dry forest, and savanna—are areas of special interest to physical geographers. Deep weathering of rocks, rapid soil erosion when the forest or grasses are removed, great rivers in the tropics, and the devastating impact of human intervention are among the topics explored. Prerequisite: Geography 114, or permission of the instructor. Mr. Lewis/Offered every other year

212 WOMEN AND SOCIAL CHANGE/SEMINAR

Examines the central assumptions and theories about the status and roles of women from multidisciplinary, cross-national, and cross-cultural perspectives, emphasizing the Third World. Explores issues pertaining to the division of labor between the sexes; relationships among class, gender, and ethnicity; the household economy; women's roles in economic development; the impact of social policies on women's lives; the internationalization of capital and women's work; and women in politics and political organizations. Materials focus on women's experience in Africa, Asia, and Latin America. Ms. Thomas-Slayter/Offered every other year

217 THE POLITICS OF LAND; KENYA, ZIMBABWE, AND SOUTH AFRICA/SEMINAR

The seminar explores the role land plays in the politics of three of the countries in Africa that experienced "settler colonialism." It examines the historical and contemporary development of land ownership in each country and explores the relationship between these developments and issues of wealth, poverty, political organization and repression and women's roles. Through fiction, journal and newspaper articles, scholarly monographs, and films, the course explores the question of the relevance of the experiences of Kenya and Zimbabwe with land reform to a post-apartheid South Africa. Ms. Grier/Offered every other year

218 SEMINAR IN PHYSICAL ENVIRONMENT AND DEVELOPMENT/SEMINAR, DISCUSSION

The world is changing more rapidly than at any time in history. This course reviews the patterns of change in the Third World, examines the role of environment and resource management in development, and allows students to develop their own in-depth case studies. Permission of instructor is required. Mr. Lewis/Offered every other year

225 AFRICAN AMERICAN POLITICS/LECTURE, DISCUSSION

Refer to course description under Government 224. Ms. Grier/Offered every other year

228 ECONOMIC DEVELOPMENT/LECTURE

Examines the major theories of economic development, the major problems confronting the less developed countries, and the policies and strategies appropriate for economic development. Topics include agricultural development, income distribution, industrialization strategies, foreign aid and investment, population, labor, and employment. Mr. Hsu/Offered every other year

229 MANAGEMENT OF ARID LANDS/LECTURE, SEMINAR

The drylands of the world present special development problems. Particularly prone to degradation, these regions face the difficult task of providing support to a rapidly growing population. Viewed in a historical perspective, the demography, behavioral characteristics, social and livelihood systems, and physical constraints of dryland ecosystems are analyzed. Special attention is paid to evaluating the management strategies currently employed in their use, identifying the obstacles constraining their growth, and assessing their future development potential. Mr. Johnson/Offered every other year

232 LIBERALISM, ISLAM AND SOCIALISM: SOCIAL JUSTICE AND DEVELOPMENT/SEMINAR

The course explores the linkage between development and social justice, why development is impossible without social justice and vice versa. It starts with the discussion of human rights and then examines and clarifies the ideas on fundamental rights in Liberalism, Marxism/Socialism, and Islam. These insights are brought to bear on understanding the concrete processes and problems of development in a number of countries identified with the three traditions. Mr. Nawawi/Offered periodically

234 LAND AND DEVELOPMENT IN LATIN AMERICA/ LECTURE, DISCUSSION

The appropriation and inclusion of Latin American lands in the larger world economy have been an object of policy and debate since the Spanish conquest. Contemporary elements of this process are reviewed, beginning with efforts at agrarian reform and their social, political, and economic significance. The incorporation of peripheral lands of the American tropics are investigated for their impacts on native populations, and finally on the global environment. Special emphasis is given to the policy context of land and development, as well as efforts to change patterns of land appropriation and inclusion for social and environmental ends. Staff/Offered periodically

236 INTERNATIONAL AND COMPARATIVE RESOURCE POLICIES/LECTURE, SEMINAR

Deals with international and comparative law/policy of water resources, fisheries, land, oceans and seas, wildlife, air, and nuclear power. Within the context of each of these topical areas, the course objectives are to define the "resource problem(s)," analyze existing institutions (i.e., property rights, management systems, and allocation regimes) and their responses to the problems, and consider conceptual guidelines for improving institutional arrangements and individual actions. Ms. Emel/Offered every other year

250 PATTERNS OF ASIAN DEVELOPMENT/SEMINAR

The course aims at understanding the central problem of development, identified as the enhancement of the capabilities and participation of the overwhelming majority of the populace. It focuses in particular on the relationships among productivity, resource mobilization, and participation. In doing so, it examines the family and social structure, land tenure, system of taxation, pattern of conflict and cooperation, industrialization and urbanization, and structure of public administration and government in Japan, China, India, and Indonesia. Mr. Nawawi/Offered periodically

251 NON-GOVERNMENT ORGANIZATIONS: CATALYSTS FOR DEVELOPMENT/SEMINAR

Many practitioners and theoreticians, disillusioned with the role of governments in the development process, have called for building nongovernment organizations (NGOs) as development catalysts. This seminar gives participants an opportunity to explore this proposal in light of the difficulties as well as progress various NGOs have experienced. Participants are encouraged to examine evidence related to NGOs with which they have worked. Ms. Seidman/Offered periodically.

256 PROBLEMS IN WATER RESOURCES PLANNING/ PROBLEMS COURSE

Water resources planning techniques; water resources engineering; and economic, social, and environmental topics are reviewed and applied in a realistic planning exercise. Students working in groups prepare, for a selected region or river basin, a preliminary planning document that could be used as a guide for future detailed planning. Emphasis is on the preparation and the written and oral presentation of the planning document in a professional manner that would be acceptable in the real world. Prerequisite: a 200-level course in environmental assessment; physical geography; economics; environmental science and policy; or permission of instructor. Mr. Schwarz/Offered periodically

257 THEORY OF MULTI-OBJECTIVE RESOURCE EVALUATION/LECTURE

Introduction to the theory of multi-objective resource evaluation. Presents the full range of criteria required for the economic, social, and environmental evaluation of resource programs and projects, together with selected applications. Mr. Ratick/Offered periodically

258 DEVELOPMENT AND REGIONAL INTEGRATION/SEMINAR

Most theorists agree that developing countries should integrate their economies to take advantage of the economies of scale required for large scale basic industries. Nevertheless, efforts to attain effective regional integration have proved difficult. This seminar explores available evidence relating to the alternative explanations and the solutions attempted to surmount those difficulties in order to propose and implement more effective regional integration schemes. Ms. Seidman/Offered periodically.

261 GIS APPLICATIONS FOR ENVIRONMENTAL MANAGEMENT/SEMINAR

The course objective is to introduce students to the application of Geographic Information

Systems (GIS) to environmental management problems in developing countries and in the United States. While no formal GIS training is required, students will participate in laboratory work and data input and analysis according to the abilities of each student, meetings with environmental activists outside the university and field reconnaissances for background information. Staff/Offered every year

263 STATE, LAW AND DEVELOPMENT/SEMINAR

Post-colonial optimism has given way to widespread disillusionment with the capacity of governments in developing countries to attain democratic, sustainable development. This seminar provides students with an opportunity to research and assess evidence as to alternative theoretical explanations offered for the governments' dismal record as a basis for improving the future role of the state in the development process. Students work alone or in groups to examine as case studies countries of their choice. Ms. Seidman/ Offered periodically.

265 MONEY, BANKING, AND PUBLIC FINANCE IN DEVELOPING COUNTRIES/SEMINAR

Explores the consequences of alternative approaches to domestic and international banking and financial institutions and the role of government in development finance in Third World countries. Ms. Seidman/ Offered periodically

269 THE AFRICAN CRISIS/SEMINAR

The course will focus on the interface among political, economic, ecological, and development variables in Africa's current crisis. It assumes that there are major dilemmas at national levels that do not have solutions, given the present set of assumptions about economic development. On the other hand, there are many locally based and historically proven management strategies that offer promise to lessen some of the ecological and political problems that face Africa. Each year, case examples will be drawn from different country and regional examples. Mr. Ford/ Offered periodically

270 ETHNIC AND SOCIAL DIFFERENTIATION

Planned and market-led development are not socioeconomically and politically neutral. Development does not equally benefit all people of socioeconomic systems; rather, it benefits some socially constructed groups often at the expense of other groups. This course examines the potential and real consequences of development interventions and market developments on populations stratified on the basis of social class, ethnicity, gender, race, and other forms of differentiation and inequality. It explores the historical and material bases of increasing social differentiation and the social dynamics of resource competition, environmental degradation, and sustainability of lifeways and livelihoods in changing socioeconomic and political environments. To gain insight into these issues, it draws on recent anthropological and sociological contributions to studies of processes of differentiation, inequality, and development for sociocultural groups of third and first world nations. Staff/Offered periodically

272 INTERNATIONAL DIVISION OF LABOR/SEMINAR

As a result of the post-World War II revolution in technologies affecting transportation and communications, analysis of Third World development requires an understanding of the consequences of the increasingly interrelated features of the global political economy. This course focuses on the role of transnational corporations and financial institutions in changing the international division of labor. The course examines how this change affects living standards, conditions of work, and incomes of workers in agriculture and industry in both developed and developing countries. Alone or in groups, students are expected to develop a term project assessing the way the changing international division of labor has affected development in a specific country or region of their choice. Ms. Seidman/Offered periodically

275 POLICIES, PROJECTS, AND STRATEGIES FOR CHANGE: A FOCUS ON GENDER/SEMINAR

Explores gender as a key variable in determining roles, responsibilities, rights, and opportunities in "developing countries." It considers various methodologies of gender analysis for their relevance to national policies and programs and their usefulness to the design, implementation, monitoring, and evaluation of projects. It focuses on community institutions and organizations and their potential roles in alleviating poverty and fostering sustainable development. Ms. Thomas-Slayter/Offered every year

276 CULTURAL ECOLOGY IN THE HUMID TROPICS/ LECTURE, SEMINAR

A mystique exists about the humid tropics. Midlatitude biases have led to inaccurate assessments of the composition of these wet, hot, lands; of traditional uses of them; and of their suitability, both past and present, to support large populations and high living standards. These issues are examined by focusing on the range of environments and livelihood strategies that have existed or could exist in this region. Mr. Turner, Ms. Rocheleau/ Offered periodically

277 GENDER, RESOURCES, AND DEVELOPMENT/SEMINAR

Considers the gender division of control, responsibility, knowledge, labor, and benefits in the definition, use, management and protection of natural resources in developing countries. Readings, lectures, and discussion focus on the distinct perspectives and concerns of women and men as actors in natural resource use and management and in local, regional, and global ecological transformations. Ms. Rocheleau/Offered every other year

278 CULTURAL ECOLOGY IN ARID LANDS/LECTURE, DISCUSSION

Drylands are risky and often inhospitable places in which to live. Yet people choose to occupy such places and to wrest a living from sparse and scattered resources. Those farmers, herders, hunters, and urban dwellers who are successful have coping strategies for dealing with drought, desertification, and environmental change. Comparison of these strategies in both developing and industrialized societies identifies obstacles to and opportunities for successful management of drylands in support of a growing population. Mr. Johnson/ Offered periodically

280 URBAN ECOLOGY; CITIES AS ECOSYSTEMS/ LECTURE, DISCUSSION

Students will explore the ecology and physical geography of cities as systems built, inhabited, and "managed" by people. This special class of ecosystem is often neglected except in very specialized studies of pollution, yet it is home to many of the world's people and to a surprising number of plant and animal species as well. Readings, lectures, discussion, and written work will combine landscape and systems ecology with physical and urban geography to broaden our understanding of city environments, both present and possible. Ms. Rocheleau/Offered periodically

281 THE PEOPLE'S REPUBLIC OF CHINA/LECTURE, DISCUSSION

A general survey of life in the People's Republic of China from 1949 to the present. Includes a general history of the People's Republic, and special attention to such themes as politics, society, family life, economics, foreign relations, literature, and the arts. Mr. Ropp/Offered every other year

282 CHINESE WOMEN IN LITERATURE AND SOCIETY/ LECTURE, DISCUSSION

Examines the changing role of women in Chinese society from the seventeenth century to the present, primarily through the reading and discussion of Chinese literature in English translation. Mr. Ropp/Offered every other year

283 TROPICAL ECOLOGY/ LECTURE, DISCUSSION

Examines the structure and function of several major tropical ecosystems (rainforests, savannas, wetlands, coastal zones, and deserts) from the perspective of systems ecology. Readings, lectures, and discussions focus on energy flows, material cycles, and species diversity and distribution. The class also explores the stability and productivity of tropical ecosystems (especially forests and savannas) under conditions of stress and their responses to widespread clearing and land use change. Ms. Rocheleau/Offered every year

284 LANDSCAPES OF THE MIDDLE EAST/LECTURE, SEMINAR

A diverse array of landscapes, economies, and cultures make up the Middle Eastern culture realm. The modernization and transformation of the traditional Islamic and non-Islamic patterns of life and livelihood in the Middle Eastern cultural mosaic are the focus of this course. Literature and ethnographic description supplement geographic analysis. Mr. Johnson/Offered every other year

287 POLITICS AND POWER IN THIRD WORLD SOCIETIES

The seminar examines the evolving nation-state in the Third World. It explores connections between colonialism and Third World political patterns, the interaction between politics and internal economic and social forces, as well as the political impact of various ideologies. Issues of peasant-state relations, local level organizations, and participation through "traditional" and "modern" associations are investigated. Specific groups—the landless; the urban poor; women; and particular ethnic, religious, clan, or caste groups—are analyzed in regard to who participates and who gets left out. Examines patron-client relations, political parties, self-help associations, and peasant mass movements for their roles in the process of socio-economic and political change. The course is organized around specific cases from Africa, Asia, and Central America. Ms. Thomas-Slayter/ Offered periodically

288 DISEASE AND HEALTH SERVICES IN THE THIRD WORLD/SEMINAR

This seminar examines epidemiology and geographic distribution of health problems in developing countries. The health systems created to address these problems also are studied in depth, including their effectiveness, costs, services utilized, and resources employed. Staff/Offered periodically

289 ADVANCED DEVELOPMENT THEORY/SEMINAR

This course assumes considerable background in development theory. It surveys recent changes in developmental thinking at an advanced level, focusing on the influence of postmodern social theory. Mr. Peet/Offered every year

295 AGRICULTURE IN THIRD WORLD ECONOMIES/LECTURE

Consumption and commodity agriculture in the non-Western world is explored. Emphasis is placed on the economic behavior and livelihood strategies employed in these economies and on theories of agricultural change. Mr. Turner/Offered periodically

297 PARTICIPATION AND ENVIRONMENTAL MANAGEMENT/ LECTURE, DISCUSSION

An understanding of environmental management for development begins with a critical examination of the policies and methods of international donors and other development organizations responsible for aiding the environment. To complete this understanding, examples of local resource user systems are investigated to evaluate how the practices of individual managers in the Third World—farmers, herders, fishermen, etc.—are brought to bear on the environment. Staff/Offered periodically

298 DEVELOPMENT PROGRAMS AND PROJECT MANAGEMENT/ SEMINAR

Explores relationships between development theory and project implementation as well as issues of program and project management. Topics include project design, implementation, management, budget monitoring, scheduling, and evaluation. Students focus on problem identification, develop project proposals, design environmental and social impact assessments, and create evaluation frameworks. Case studies are used extensively. Mr. Ford, Ms. Thomas-Slayter/Offered every year

299 SEC.1 READINGS IN INTERNATIONAL DEVELOPMENT/DISCUSSION

Variable credit and topics relevant to issues of international development. Staff/Offered every year

299 SEC.2 RESEARCH IN INTERNATIONAL DEVELOPMENT

Variable credit, differing topics, may be associated with international development research projects. Staff/Offered every year

302 THESIS RESEARCH

Master's degree candidates may register for thesis research while working on research for their master's degree thesis. Staff/Offered every year

310 RESEARCH SEMINAR IN DEVELOPMENT GEOGRAPHY/SEMINAR

Designed for thesis- and dissertation-level students working in the areas of resources, development, ethno-ecology, social theory, and political economy in developing countries, who are developing proposals or pre-proposal research papers. The seminar provides a forum for discussion, criticism, and practical advice. Places strong emphasis on ethnographic approaches and qualitative field methods. Prerequisite: 314 or permission of instructor. Meets graduate skills requirement in Geography and International Development. Ms. Rocheleau/Offered every other year.

314 RESEARCH DESIGN AND METHODS/SEMINAR

Covers all the major topics in research design and methodology: e.g., problem definition, research strategies, measurement, sampling, and data collection techniques and procedures. Mr. Mitchell/Offered every year

327 GEOGRAPHY AND SOCIAL THEORY/SEMINAR

Explores major themes in contemporary social theory as they relate to geographical studies. Emphasis is placed on Marxism, structuralism, feminism and postmodern social theory. Mr. Angel, Mr. Peet/Offered every other year

330 SEMINAR IN CULTURAL ECOLOGY/SEMINAR

The "ecological transition," the increasing incorporation of nature into human culture, is the point of departure for an examination of the theory, method, and policy relevance of cultural ecology. Prerequisite: Geography 278 or equivalent. Mr. Johnson, Mr. Turner/Offered periodically

338 SEMINAR IN INDUSTRIAL GEOGRAPHY/SEMINAR

Surveys recent trends in industrial geographic theory in response to the internationalization of capital and the rapidly changing futures of old industrial regions. Mr. Peet/Offered periodically

350 INTERNSHIP/FIELD WORK

Graduate students in international development may elect to undertake field work over and above the eight credits required for fulfillment of the master's degree. Internship is normally overseas for purposes of research related to the thesis. Staff/Offered every semester

351 SEMINAR IN RESOURCE GEOGRAPHY: THEORY AND METHOD/SEMINAR

Examination of major theories and methods of resource estimation, allocation, and management, providing coverage of the scholarly literature of the field. Ms. Emel/Offered every other year

355 SOCIAL FORESTRY AND DEVELOPMENT/SEMINAR

Considers the importance of trees and forests to the social and ecological well-being of people, with an emphasis on the interests of rural people in Africa, Asia, and Latin America. The class examines forest resources as a growing focus of political and economic action at local, national, and international levels during the coming decade. After a broad review of the field, students concentrate on case study examples of technical and policy innovations in social forestry and agroforestry. Ms. Rocheleau/Offered every other year

357 APPROACHES TO REGIONAL DEVELOPMENT PLANNING/SEMINAR

This graduate seminar is intended to provide an understanding of the issues encountered in development intervention: growth and equity; sectoral emphasis; spatial distribution; and relations between classes, regions, states, and natural resources. Through a review of the literature on development economics, political economy, growth models, spatial analysis, modernization theories, and rural-urban dynamics, this course focuses on concepts of the region as the unit for development planning and intervention. Mr. Karaska/Offered every year

360 DEVELOPMENT THEORIES AND PHILOSOPHIES OF CHANGE/SEMINAR

A graduate seminar that examines development theory, relating theory, issues, and practice with an emphasis on the evolution of ideas and the search for alternative approaches to development interventions. Ms. Seidman, Staff/Offered every year

369 SEMINAR IN ENVIRONMENT AND DEVELOPMENT/SEMINAR

The complex, often counter-intuitive, linkages between nature, society, and technology have produced more failures in attaining development objectives than successes. The seminar focuses on exploring reasons and explanations for this mixed result. Case studies from a wide range of economic, social, and environmental settings are examined to isolate principles of successful development. Ms. Rocheleau, Mr. Johnson/Offered periodically

370 ANIMAL AGRICULTURE/ LECTURE, DISCUSSION

Animals and humans have a long history of close association. First as hunters and then as domesticators, humans have relied on animals for food, fiber, labor, and companionship. The ecology of many diseases also links people to the animals that they exploit. Today animals play an increasingly important role in efforts to increase food production and to improve diet quality in support of a growing human population. Both terrestrial and aquatic animal systems, and the theory and practice of their intensified exploitation, are examined in this seminar. Mr. Johnson/Offered every other year

390 GIS AND INTERNATIONAL DEVELOPMENT

This course focuses on the broad philosophical issues underlying the implementation of Geographic Information Systems and related information technologies in an International Development context. It will consider issues concerning technology, policy and democratic values and the role of information technology in democratic societies. It will explore institutional questions regarding implementation of GIS in developing countries and specific issues of technology transfer. Participants will be introduced to the major funding agency programs, their philosophical and structural character, implementation strategies and system design procedures. Prerequisite, Geo. 190 or permission of the instructor. Mr. Eastman/Staff/Offered every year

395 ECONOMIC DEVELOPMENT AND POLICY ANALYSIS/SEMINAR

This course reviews alternative approaches to planning for development in the Third World, ranging from that proposed by the World Bank and IMF to that suggested by a socialist perspective. It explores the issues relating to institutional change required to implement alternative kinds of plans in indus-

try, agriculture, trade, and finance. Students are expected (alone or working in groups) to develop a term project critiquing the formulation and implementation of development plans in any developing country they select.
Ms. Seidman/Offered periodically
For additional courses related to international development, refer to the following History Department listings:

020 AMERICA AND THE WORLD/LECTURE, DISCUSSION

Refer to course description under History 020.
Mr. Little/Offered every year

173 LATIN AMERICAN HISTORY SINCE 1825/LECTURE, DISCUSSION

Refer to course description under History 177.
Mr. Little/Offered periodically

181 TRADITIONAL CHINA/ LECTURE, DISCUSSION

Refer to course description under History 181.
Mr. Ropp/Offered every other year

184 MODERN JAPAN/LECTURE

Refer to course description under History 184.
Staff/Offered every other year

291 ADVANCED TOPICS IN INTERNATIONAL RELATIONS/SEMINAR

Refer to course description under History 291.
Mr. Little/Offered every year

321 HEALTH SYSTEMS

Refer to course description under MHA 320.

340 HEALTH CARE STRATEGIC PLANNING

Refer to course description under MHA 340.

380 HEALTH POLICY

Refer to course description under MHA 380.

Management

FACULTY

Robert A. Ullrich, D.B.A., dean: organizational theory and design

Margarete Arndt, D.B.A.: management of health care organizations, clinical practice patterns

Subramanian Balachander, Ph.D.: product strategy, pricing, competitive strategy

Michael J. Barone, Ph.D.: consumer/buyer behavior, marketing research

Barbara Bigelow, Ph.D.: strategic management in health care facilities, corporate political strategy

Robert C. Bradbury, Ph.D.: health policy, health services research

Gary N. Chaison, Ph.D.: union structure, government and growth; comparative industrial relations; collective bargaining

Dileep G. Dhavale, Ph.D., C.P.A., C.P.I.M.: financial and managerial accounting

Priscilla Elsass, Ph.D.: organizational behavior, organizational theory

Joseph H. Golec, Ph.D.: finance, determinants of incentive compensation contracts for investment advisors and their impact on performance and risk taking

Laura M. Graves, Ph.D.: employee recruitment and selection, managing diversity in organizations

Jane Kapral, M.S., C.P.A.: financial accounting, managerial accounting

Edward J. Ottensmeyer, Ph.D.: strategic management, philosophy and business

R. P. Sundarraj, Ph.D.: management information systems, operations management

Maurry Tamarkin, Ph.D.: portfolio analysis, capital investment, investor behavior

Daniel A. Verreault, Ph.D., C.P.A.: accounting information systems, managerial accounting

Rudolph C. Yaksick, Ph.D.: economics, derivative securities

AFFILIATE FACULTY

Marjorie A. Clay, Ph.D.: medical ethics

N. Lynn Eckhert, M.D., D.P.H.: family and community medicine, health policy

Philip C. Nasca, Ph.D.: epidemiology

John T. O'Connor, Ph.D.: medical economics, federal and state health policy

Robert J. Perry, Ph.D.: calculus, algebra, linear algebra, geometry

Pamela D. Sherer, Ph.D.: organization behavior, total quality management

PART-TIME FACULTY

Rockie Blunt, M.A.: managerial communications, presentation skills

Mary-Ellen Boyle, Ph.D. (expected 1995): managerial challenges, women and men in management

Edson D. de Castro, B.S.: new venture management

Christian J. Delaunay, Ph.D.: international marketing and finance

Robin J. Dimieri, J.D., M.A.: legal aspects of health management

Gail M. Frieswick, M.S., Ed.D.: hospital management, governance

Murray Hershman, J.D.: taxation, business law

James M. Hunt, D.B.A.: career development, consulting skills

Robert E. Maher, Jr., M.H.A.: ambulatory care administration

Thomas P. Millott, J.D.: business law, real estate law, environmental law

Alan M. Stoll, M.P.A.: ambulatory care administration, health maintenance organizations

■ EMERITI

Harold T. Moody, Ph.D.: statistics, market pricing

■ UNDERGRADUATE PROGRAMS IN MANAGEMENT

The Graduate School of Management offers four programs for undergraduates: the undergraduate major, the undergraduate minor, the five-year B.A./M.B.A. program, and the five-year B.A./M.H.A. program. Program descriptions follow. Interested students should contact the assistant dean for academic affairs in the Graduate School of Management. Students should refer to the Graduate School of Management catalog for additional information on the M.B.A. and M.H.A. programs.

■ UNDERGRADUATE MAJOR IN MANAGEMENT

The management major incorporates a variety of disciplines to form a program that is both practical and broadly educational. Required and optional courses include offerings from a number of academic departments. Both the undergraduate management major and the M.B.A. program are accredited by the American Assembly of Collegiate Schools of Business.

The required curriculum for management majors consists of nine prerequisite courses taken during the freshman and sophomore years, and nine required courses taken during the junior and senior years. A 2.0 cumulative grade point average in the prerequisite courses is required for credit toward the major. Management offers students a bachelor's degree with a professional emphasis, providing the necessary prerequisites for job placement. Students interested in graduate study toward an M.B.A. or M.H.A. degree are encouraged to major in an area other than management and to consider the five-year B.A./M.B.A. or B.A./M.H.A. program.

■ REQUIREMENTS FOR MANAGEMENT MAJORS

Prerequisite Courses:

Freshman/Sophomore Years

MATH 110 Functions and Calculus I or
MATH 120 Calculus I
ECON 010 Issues and Perspectives
ECON 011 Principles of Economics
ECON 160 Introduction to Statistical Analysis
ENV xxx any ENV course
MGMT 101 Principles of Accounting
MGMT 104 Introduction to Management Information Systems
MGMT 170 Managerial Communications
MGMT 178 Business Law

Required Courses:

Junior Year-Fall

MGMT 203 Management Accounting
MGMT 210 Management and Behavioral Principles
MGMT 240 Corporate Finance

Junior Year—Spring

MGMT 230 Marketing Management
MGMT 250 Operations Management

Senior Year-Fall

MGMT 260 Business Policy
MGMT-Management Elective

Senior Year-Spring

MGMT 262 Business Ethics
MGMT-Management Elective

UNDERGRADUATE MINOR IN MANAGEMENT

Students whose primary interest is liberal arts but who would like to be exposed to business-related topics should consider management as an undergraduate minor. The required curriculum for management minors consists of the six prerequisite courses taken during the freshman and sophomore years, and the four required courses taken during the junior and senior years. Students interested in graduate study toward an M.B.A. or M.H.A. degree are encouraged to minor in an area other than management and to consider the five-year B.A./M.B.A or B.A./M.H.A. program.

REQUIREMENTS FOR MANAGEMENT MINORS

Prerequisite Courses:

Freshman/Sophomore Years

MATH 110 Functions and Calculus I or
MATH 120 Calculus I
ECON 010 Issues and Perspectives
ECON 011 Principles of Economics
ECON 160 Introduction to Statistical Analysis
MGMT 101 Principles of Accounting
MGMT 104 Introduction to Management Information Systems

Required Courses:

Junior/Senior Years

MGMT 210 Management and Behavioral Principles
MGMT 230 Marketing Management
MGMT 240 Corporate Finance
MGMT 250 Operations Management

FIVE-YEAR PROGRAMS

The Graduate School of Management offers undergraduate students the option of participating in two five-year programs, in which they can earn a B.A. in their major, as well as an M.B.A. or M.H.A. degree. Major features of the program are:

1. an undergraduate major in any of the liberal arts disciplines at the University. Management is not recommended as a major for this program.
2. graduate courses, beginning in the senior year, which lead to an M.B.A. or M.H.A. degree and help students prepare for management positions in business, government, and nonprofit organizations.

The five-year program is designed to meet several needs expressed by students today. It provides a well-rounded education by combining an undergraduate liberal arts education with a master's degree and reduces the total time for earning both degrees to five years.

THE PROGRAM COURSES

The five-year programs involve four sets of learning experiences:

1. courses in departments such as economics and mathematics, which provide the tools needed for graduate study in management;

2. the possibility of spending the junior year abroad;
3. graduate management courses taken in the senior year;
4. completion of the M.B.A. or M.H.A. program during the fifth year.

Student Advising and Entrance into the Program

Students should plan their undergraduate courses carefully so that they complete the requirements for both their major and the M.B.A. or M.H.A. degree in the time available. The management school's assistant dean for academic affairs is available to advise students interested in the five-year B.A./M.B.A. program. The director of the M.H.A. program counsels students interested in the B.A./M.H.A. program.

Admission occurs after the sophomore year, but before the beginning of the senior year. Interested students are required to apply to the Graduate School of Management for admission. As part of the application process, students are required to submit transcripts of undergraduate academic work and to take the G.M.A.T. (Graduate Management Admission Test) for the M.B.A. program, and either the G.M.A.T. or G.R.E. (Graduate Record Exam) for the M.H.A. program.

Work Experience

Five-year students are encouraged to participate in internships, summer jobs, or other experiences that can provide exposure to management issues and environments. The exposure can improve a student's appreciation of graduate courses, and can enhance his or her credentials and qualifications for job placement upon graduation from the master's program.

■ FIVE-YEAR B.A./M.B.A. PROGRAM

Freshman Year/Sophomore Year

ECON 010 Issues and Perspectives
ECON 011 Principles of Economics
ECON 160 Introduction to Statistical Analysis or
PSYC 105 Quantitative Methods
MATH 110 Functions and Calculus I or
MATH 120 Calculus I

Junior Year

Apply to M.B.A. portion of the program

Senior Year

Complete B.A. requirements (in major other than management)

MBA 310 Foundations of Accounting
MBA 320 Financial Management
MBA 330 Organization Behavior
MBA 340 Marketing Management
MBA 350 Management Information Systems
MBA 360 Operations Management
MBA 370 Managerial Communications

Fifth Year

MBA 371 General Management
MBA 372 International Management and Global Competition
MBA 373 Business Law and Regulatory Policy
MBA 374 Business in Society
MBA 375 Business Policy

Five electives in M.B.A. Program

■ FIVE-YEAR B.A./M.H.A. PROGRAM

Freshman Year/Sophomore Year

ECON 010 Issues and Perspectives
ECON 011 Principles of Economics

ECON 160 Introduction to Statistical Analysis or PSYC 105 Quantitative Methods
MATH 110 Functions and Calculus I or MATH 120 Calculus

Junior Year

Apply to M.H.A. portion of the program and complete the B.A. major requirements

Senior Year

Complete B.A. requirements (in major other than management)

MBA 310 Foundations of Accounting
MBA 330 Organization Behavior
MBA 340 Marketing Management
MBA 350 Management Information Systems
MHA 320 Health Systems
MHA 350 Economic Aspects of Health Care Administration
MHA 370 Financial Management of Health Care Organizations

Fifth Year

MHA 330 Epidemiology
MHA 360 Legal and Ethical Aspects of Health Care Administration
MHA 380 Health Policy
MHA 390 Health Care Management
MHA 400A Expanded Applied Field Project

Five electives in M.H.A. Program

■ COURSES

101 PRINCIPLES OF ACCOUNTING/ LECTURE, DISCUSSION

A "user-oriented" approach is taken in this course to teach students an understanding of accounting information, and of the environment in which it is developed and used. Topics to be discussed include: the history of accounting, the accounting cycle, merchandising activities, accounting for assets, liabilities, and equity and international accounting issues. Staff/Offered every semester

104 INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS/LECTURE, DISCUSSION

The basic knowledge needed to understand the field of information systems is studied. Topics include information and organization, database management, recent developments in computer technology and their effect on management, and information systems design and management. Staff/Offered every semester

170 MANAGERIAL COMMUNICATIONS/LECTURE, DISCUSSION

This course is designed to help managers communicate with confidence by showing them how to prepare clear, concise memos, letters, reports and proposals, and to deliver effective oral presentations. Through active class participation and in-class writing exercises, students develop confidence in their ability to communicate effectively. Staff/Offered every year

178 BUSINESS LAW/ LECTURE, DISCUSSION

Examines the legal framework in which U.S. businesses operate. The course focuses on the laws that determine the rights and obligations of persons taking part in business transactions. Emphasis is on those areas of the law commonly encountered by the business manager, such as contract negotiation and provisions, the Uniform Commercial Code, government regulations, consumer protection, and tort liability. The goal is to provide students with an understanding of the business and legal environments that will guide future management decisions and inquiry. Assigned readings and class discussion of cases illustrate these topics. Staff/Offered every semester

203 MANAGEMENT ACCOUNTING/ LECTURE, DISCUSSION

An emphasis is placed on accounting from the management perspective. Students learn principles of management decision making using accounting information. Prerequisite: Management 101. Staff/Offered every semester

210 MANAGEMENT AND BEHAVIORAL PRINCIPLES/ LECTURE, DISCUSSION

General principles of management are studied, with an emphasis on the behavior of people in organizational settings. Topics include principles of organization, decision making, leadership, motivation and rewards, job satisfaction, appraising employee performance, and the impact of demographic diversity on organizations. Staff/Offered every year

211 ORGANIZATION STRUCTURE AND PROCESS/ LECTURE, DISCUSSION

Students survey the major concepts of organizational theory, with an emphasis on applying these concepts to business problems. Topics include the properties of organizational environments, organizational structure, organizational power and conflict, and organizational change. Prerequisite: Management 210. Staff/Offered periodically

225 HUMAN RESOURCE MANAGEMENT/LECTURE, DISCUSSION

Covers the general functions of human resource management, including job design, recruitment, management development and training, performance appraisal, employee rights, labor relations and collective bargaining, wages and fringe benefits, and compensation systems. Staff/Offered every year

226 INDUSTRIAL RELATIONS/ LECTURE, DISCUSSION

An introduction to the concepts, theory and practice of labor-management relations. Topics include: the development of the trade union movement; union organizing; the structure, practices and outcomes of collective bargaining; the administration of the collective agreement; dispute resolution procedures; and the public policy of labor relations. Staff/Offered every year

230 MARKETING MANAGEMENT/ LECTURE, DISCUSSION

Surveys the role of marketing in business and society. Topics include the marketing environment, marketing research and information systems, consumer behavior, the organizational consumer, products, pricing, distribution, promotion, international service, and nonprofit marketing. Prerequisites: Economics 010, 011; Management 101. Staff/Offered every year

231 MARKETING RESEARCH/ LECTURE, DISCUSSION

Marketing research focuses on consumer behavior and retail advertising. Topics include: primary and secondary data collection, questionnaires for attitude and awareness surveys, mail and phone surveys, persona interviews, focus groups, and data analysis techniques. Prerequisite: Management 230. Staff/Offered periodically

234 CONSUMER BEHAVIOR/ LECTURE, DISCUSSION

This course examines how people search for, purchase, use, evaluate, and dispose of the products, services, and ideas they expect to satisfy their needs. Emphasis is on the issues o market segmentation and the diffusion of innovations. Ethical, legal, and public policy issues are also discussed. Prerequisite: Management 230. Staff/Offered every year

240 CORPORATE FINANCE/ LECTURE, DISCUSSION

Financial decision making is studied from the perspective of the internal financial manager. A comprehensive study is made of valuation, cost of capital, capital structure, capital budgeting, and financial analysis. Prerequisites: Economics 010, 011, 160; Math 110 or 120; Management 101. Staff/Offered every year

242 INVESTMENTS/LECTURE, DISCUSSION

This course covers investment principles, market behavior, and investment strategy. Investment principles include: portfolio selection, fundamental analysis, portfolio theory, debt instruments and money markets, the stock option market, and alternative investments. Prerequisite: Management 240. Staff/Offered periodically

250 OPERATIONS MANAGEMENT/ LECTURE, DISCUSSION

Provides a comprehensive overview of operations management systems, emphasizing model building and applications. Topics covered include: forecasting, quality control, inventory management, material requirement planning, machine loading, job sequencing and scheduling, project management and control, decision theory, and linear programming. Prerequisites: Economics 010, 011, 160; Management 101, 104; Math 110 or 120. Staff/Offered every year

260 BUSINESS POLICY/CASE STUDIES, LECTURE, DISCUSSION

This course describes the integration of major management functions (e.g., marketing, finance, and production) in the selection and execution of an appropriate strategy. This capstone course should be taken during the senior year. Prerequisites: Management 210, 230, 240, 250. Staff/Offered every year

262 BUSINESS ETHICS/CASE STUDIES, LECTURE, DISCUSSION

The social, political, technological and ethical issues confronting the modern corporation require contemporary managers to develop a broad-gauged knowledge base to deal with complex situations. This course examines the relationship between organizations and their many stakeholders. Managerial values and ethics are also analyzed. Staff/Offered every year

284 FEDERAL TAX ACCOUNTING/ LECTURE, DISCUSSION

A basic course in the principles of federal income tax laws that apply to individuals and organizations. Students develop an understanding of the effects of tax considerations on business decisions. The course explores general rules and accounting principles, emphasizing preparation of tax returns through problem analysis. Prerequisite: Management 101. Staff/Offered periodically

■ THE MASTER IN BUSINESS ADMINISTRATION PROGRAM

The M.B.A. program at Clark University develops competence in basic management functions, skill in managing organizations, and an understanding of the global environment. Each graduate of Clark's M.B.A. program is able to demonstrate:

- basic competence in each of the functional areas of management,
- in-depth understanding of one of the functional areas of management, new venture management, or health administration,
- skill in integrating the management functions into an effective organization,understanding of the legal, political, ethical, social, and environmental responsibilities of management,
- appreciation of the global context in which most organizations function, and
- the leadership and communication skills needed to formulate and implement management decisions.

Curriculum

The M.B.A. curriculum includes nineteen courses taken for credit, plus a noncredit mathematics review course that may be waived by students demonstrating competence in college-level mathematics. The twenty courses are grouped into four categories:

Foundation Courses

MBA 299 Mathematics for Managers (not for credit)
MBA 301 Management Economics
MBA 302 Statistical Methods

Functional Courses

MBA 310 Foundations of Accounting
MBA 320 Financial Management
MBA 330 Organization Behavior
MBA 340 Marketing Management
MBA 350 Management Information Systems
MBA 360 Operations Management

General Management Courses

MBA 370 Managerial Communications
MBA 371 General Management
MBA 372 International Management and Global Competition
MBA 373 Business Law and Regulatory Policy
MBA 374 Business in Society
MBA 375 Business Policy

Elective Concentrations

Students are required to take five electives, three in one area of concentration and the two others from two areas other than the area of concentration. Elective concentrations are as follows:

Accounting

MBA 311 Management Control Systems
MBA 312 Analysis of Financial Statements
MBA 313 Accounting Information Systems
MBA 314 Cost Measurement and Control
MBA 315 Financial Accounting and Reporting I
MBA 316 Financial Accounting and Reporting II
MBA 317 Financial and Operational Auditing

Finance

MBA 321 Corporate Finance
MBA 322 Investments
MBA 323 Real Estate
MBA 324 International Finance
MBA 325 Financial Institutions
MBA 326 Corporate Risk Management
MBA 327 Derivative Securities: Futures, Swaps and Options
MBA 328 Tax Strategies and Management Decisions

Health Care Management

MHA 320 Health Systems
MHA 340 Health Care Strategic Planning
MHA 350 Economic Aspects of the Medical Care Industry

MHA 360 Legal Aspects of Health Care Administration
MHA 370 Financial Management of Health Care Organizations
MHA 390 Health Care Management

Human Resource Management

MBA 331 Organization Structure and Process
MBA 332 Women and Men in Management
MBA 333 Career Development
MBA 334 Human Resource Management
MBA 335 Industrial Relations
MBA 336 Collective Bargaining

Marketing

MBA 341 Marketing Research
MBA 342 Sales and Sales Management
MBA 343 Market Pricing
MBA 344 Consumer and Industrial Buyer Behavior
MBA 345 International Marketing
MBA 346 Services Marketing
MBA 347 Business to Business Marketing
MBA 348 Advertising and Promotion
MBA 349 Product Management

New Venture Management

MBA 349 Product Management
MBA 377 New Venture Management
MBA 378 New Ventures Seminar
MBA 379 Strategic Management of Technology
MBA 381 Management Consulting Projects

Expanded Accounting Concentration

The expanded accounting concentration satisfies the upcoming 150-hour, postsecondary education requirement for certified public accountant candidates. This requirement, which currently is law in more than twenty states, is expected to affect Massachusetts C.P.A. candidates within five years. Clark's expanded accounting concentration satisfies this requirement and gives students an opportunity to prepare for the C.M.A. examination. Students pursuing this option must complete the foundation, functional and general management courses along with the following electives:

MBA 313 Accounting Information Systems
MBA 314 Cost Measurement and Control
MBA 315 Financial Accounting and Reporting I
MBA 316 Financial Accounting and Reporting II
MBA 317 Financial and Operational Auditing
MBA 328 Tax Strategies and Management Decisions

The expanded accounting concentration gives students a broad background in management practices in addition to specialized knowledge of the theories and practices of accounting.

Full-time and Part-time Options/Class Locations

The M.B.A. Program is accessible to both full- and part-time students. Clark operates on a semester system. During the fall and spring semesters, classes are held from 9 a.m. until noon and from 1 p.m. until 4 p.m. at the Clark campus. Classes meet from 6 p.m. to 9 p.m. at Clark and in Westborough at the Massachusetts Microelectronics Center (M2C), one-half mile from the intersection of Route 9 and Route 135 West. All classes meet once a week, on Monday, Tuesday, Wednesday or Thursday. Summer sessions are held at both campuses, with classes meeting twice weekly in the evening from mid-May to the end of June in Worcester and Westborough, and in the afternoon in Worcester.

Courses are taught by the same faculty at both campuses; students may take courses at either campus. In Worcester, all required courses are taught at least once per year, along with a wide selection of electives. All required courses and a variety of electives are taught each year in Westborough. For scheduling details, students should consult the registration booklet, which is distributed before the start of each academic year.

ACADEMIC POLICIES

General Graduation Requirements

Candidates for the M.B.A. degree must meet the requirements of twenty courses: fifteen required and five elective courses. For the accounting concentration, fifteen required and six elective courses (a total of twenty one) must be completed. Students must pass a minimum of ten courses (excluding MBA 299) in the Graduate School of Management to meet the residency requirement of Clark University's M.B.A. Program. A maximum of nine courses may be waived and/or transferred (see below). Students usually are permitted a maximum of six years from the date of their initial enrollment in the M.B.A. Program to complete all degree requirements. The minimum grade point average required for graduation is a 3.0 (B).

Course Waivers

M.B.A. students may apply for waivers from the three foundation courses and the six functional courses.

Course waivers are based on transcript reviews, examinations, or both and are granted based only on courses taken before the student's matriculation at Clark. A waiver reduces the number of courses the student must take. Typically, a waiver is granted when an entering student presents evidence of having passed an equivalent graduate-level course, or two or more baccalaureate courses, with grades of B or better in the relevant subject area. Waiver examinations are required when such course work has not been taken in programs accredited by the American Assembly of Collegiate Schools of Business (A.A.C.S.B.). Waiver examinations are offered by the Graduate School of Management during the week of orientation in September and January. Waivers will depend in part on how recently a substitute course was taken: for example, courses in M.I.S. taken more than five years before the date of application for waiver will not be acceptable.

Students applying for waivers should submit a completed Request for Course Waiver form with their application to the Admissions Office. The opportunity for waiving courses exists only during a student's first year in the program. If registration for a semester depends upon a waiver, the waiver must be approved before the registration deadline.

Transfer Credit and Residency Requirement

M.B.A. students may receive transfer credits for no more than two graduate-level courses taken at schools accredited by the A.A.C.S.B. Usually transfer credits are assigned only to elective courses. The student must have earned grades of B or better, and the credits from the course(s) must not have applied to another degree. Using transfer credits, students can reduce the twenty (M.B.A.) or twenty-one (accounting concentration) course requirement by two courses. Transfer credit may be granted by examination for course work completed at nonaccredited programs or taken more than five years before the date of application for transfer credit. Prior approval, which is granted by the assistant dean for academic affairs, is required for transfer credit after the student has matriculated in the M.B.A. program. Generally, approval is granted for appropriate course work that is not available at Clark.

Regardless of the number of courses transferred or waived, M.B.A. candidates must pass a minimum of ten courses (excluding MBA 299) taken at Clark to meet Clark's residency requirement.

Grade-Point Average

Master's degree candidates must maintain a minimum grade-point average of 3.0 to remain in good standing and eligible for graduation (A = 4.0 points, B = 3.0 , C = 2.0, and F = 0: + or - symbols attached to letter grades increase or decrease them, respectively, by 0.3). Waived courses, incomplete courses and courses taken outside Clark University are not included in computations of grade-point averages.

Grading System

Letter grades are used in performance evaluation as follows:

A Outstanding
B Good
C Marginal Pass
F Failing

I Incomplete: An Incomplete is given at the discretion of the instructor when circumstances beyond the student's control prevent him or her from meeting specific out-of-class course requirements. Students have one year from the date of the last class meeting of the course to make up outstanding course work, after which they will receive grades. An incomplete course will be deleted from the student's record if not completed within the specified year.

W Withdraw: Indicates that the student withdrew from the course. Students may not withdraw after the tenth scheduled class meeting.

Grade Changes

Once grades have been submitted to the registrar, grade changes can be made only if the instructor certifies in writing that the grade to be altered resulted from an error.

Full-time Students

To be considered a full-time student in the Graduate School of Management, an individual must be registered for at least three courses in a given semester.

Review of Graduate Standing

All student academic records are reviewed each semester. Students with cumulative grade-point averages of 3.0 or more are considered to be in good standing. While the grade of C earned in a course is a passing grade, a cumulative grade-point average of B is required for graduation. Any student whose cumulative grade-point average falls below 3.0 is not considered to be performing adequately. Students are placed on academic probation when they have taken four or more courses and their cumulative grade point average falls below 3.0. Students who remain on academic probation after taking eight courses may be dismissed from the Graduate School of Management.

Leave of Absence

Students currently matriculated in the Graduate School of Management may take an official leave of absence for up to one year. Leave will be granted by the assistant dean for academic affairs or the director of the M.H.A. program on written application by the student. Leaves may be granted for reasons relating to work, health, travel or personal development. Students who do not register for classes in the semester following the leave of absence will be withdrawn and must reapply for admission.

Joint M.B.A./M.S.N. or M.H.A./M.S.N. Programs
In conjunction with the University of Massachusetts Medical Center's Nursing School, Clark's Graduate School of Management offers a program that leads to the M.B.A. or M.H.A. and M.S.N. degrees. The program enables selected students to achieve both degrees by completing a rigorous and comprehensive two-year curriculum. Details about the program can be obtained by contacting the Graduate School of Management Admissions Office.

■ COURSES

(Refer to Graduate School of Management Catalog for more information.)

MBA 299 MATHEMATICS FOR MANAGERS

Competence in algebra and familiarity with calculus are required in many of the courses taught in Clark's Graduate School of Management. This course is designed to assist students whose skills in mathematics are undeveloped. All M.B.A./M.H.A. candidates must either complete the course or be exempted from it. The course is offered Pass/Fail and does not carry graduate credit. Six modules of instruction are included: a review of algebra, linear algebra, introduction to differential calculus, introduction to integral calculus, applied business mathematics, and computer software applications.

MBA 301 MANAGEMENT ECONOMICS

Managers of organizations—whether for-profit, nonprofit, or government agencies—face a common set of resource allocation problems. This course will develop a student's ability to formulate and solve these problems, drawing upon the economic theories of consumer demand, the firm and industrial organization, as well as mathematical optimization techniques. It will provide a framework for analyzing the flexible multiproduct firm, as well as competitive and cooperative business situations from a strategic (game theoretic) perspective. Topics to be covered include: demand analysis, production and cost analyses, flexible manufacturing, market structure and strategic behavior, pricing practices, government regulation, and decision making under uncertainty. (Prerequisite: MBA 299)

MBA 302 STATISTICAL METHODS

In the increasingly competitive business environment, most firms have come to rely on quantitative methods for data analysis and decision making. This course emphasizes problem solving. Topics covered include probability theory, sampling theory, the central limit theorem, estimation, inference, hypotheses testing, regression analysis, and analysis of variance. Students learn how and when to apply these "tools," and how to interpret their results. (Prerequisite: MBA 299)

MBA 310 FOUNDATIONS OF ACCOUNTING

Managers use accounting data to measure and evaluate organizational performance, and to make decisions based on their evaluations. This course introduces accounting as "the language of business" by identifying and discussing the generally accepted terminology and concepts. Topics include the accounting recording process, financial reporting and accounting principles, and the application of accounting information in managerial decision processes. Students enhance their analytical skills by practicing compilation, reformulation, and analysis of basic financial data.

MBA 311 MANAGEMENT CONTROL SYSTEMS

This course studies organizational planning and control, and analyzes the ways in which management accounting practices can aid (and occasionally impede) planning and control processes. Topics include management control systems, key variables and performance measurements, organizing for control, budget planning, and measuring divisional performance. (Prerequisite: MBA 310; MBA 330 is recommended)

MBA 312 ANALYSIS OF FINANCIAL STATEMENTS

This course is designed to increase skill levels in reading and interpreting financial statements and reports, reconstructing and restructuring financial data, using and interpreting basic analytical techniques for financial statement analysis, and communicating financial results, both orally and in writing. (Prerequisite: MBA 310)

MBA 313 ACCOUNTING INFORMATION SYSTEMS

This course explains the various control and accounting procedures used in collecting, measuring, summarizing, and reporting financial data generated by an organization's operating units. The course emphasizes procedural techniques and studies the flow of financial data through an organization's accounting system. (Prerequisites: MBA 310 and 350)

MBA 314 COST MEASUREMENT AND CONTROL

The collection and analysis of cost data, methods of cost control, and the relevance of various accounting data for managerial decision making in manufacturing and nonmanufacturing organizations is covered. Topics include: standards, standard costing, variance analysis, detailed budget preparation, cost accumulation procedures, and various cost control and performance evaluation issues. (Prerequisite: MBA 310)

MBA 315 FINANCIAL ACCOUNTING AND REPORTING I

Accounting issues relevant to commercial organizations are numerous and complex. A set of accounting literature, referred to as Generally Accepted Accounting Principles or G.A.A.P., guides the profession in the resolution of these issues. This course does not attempt to cover all G.A.A.P., but provides a foundation for solving practical financial problems by introducing certain topics that are important in understanding the complexities of the business and financial world. The conceptual framework of accounting is discussed then used to study accounting literature related to the recognition and measurement of current and noncurrent assets, current and noncurrent liabilities, stockholders' equity, and the development of income statements and balance sheets. (Prerequisite: MBA 310 or its equivalent)

MBA 316 FINANCIAL ACCOUNTING AND REPORTING II

A continuation of Financial Accounting and Reporting I, this course addresses accounting literature guiding the profession in areas such as accounting for income taxes, pensions and post-retirement benefits, and leases. The treatment of accounting changes and errors, the preparation of the statement of cash flows, and required disclosure for financial reporting also are discussed. Finally, advanced topics such as business combinations, consolidated financial statements, and accounting for partnerships are addressed. (Prerequisite: MBA 315)

MBA 317 FINANCIAL AND OPERATIONAL AUDITING

This course covers the fundamental aspects of financial auditing, including management's responsibility for financial statements, the legal liability of auditors, evaluation of internal control structures, substantive tests and tests of systems, and audit reports. Operational auditing and current developments in environmental auditing are also covered. (Prerequisite: MBA 310)

MBA 320 FINANCIAL MANAGEMENT

Assume financial managers make decisions that will increase the value of the firm by optimizing the size and timing of cash flows and minimizing accompanying risks. The course covers the major issues confronting financial managers, including the determination of optimal methods of raising and investing funds. (Prerequisites: MBA 301, 302, 310)

MBA 321 CORPORATE FINANCE

This course extends the presentation of the theoretical issues in finance provided in MBA 320. The student is exposed to additional financial theories and gains practice in applying theories to actual problems through analysis of case studies. The emphasis of this class is on the major, long-term financial decisions that managers face. Topics include risk, cost of capital, capital budgeting, and capital structure. (Prerequisite: MBA 320)

MBA 322 INVESTMENTS

Topics covered include investment principles, market behavior, and investment strategies. Students examine the types of risks associated with, and the returns available from, marketable securities. In addition to studying stocks and bonds, the course provides a risk-return analysis of alternative investment vehicles, such as options and futures. Views of investment professionals are presented to the class live and by video records. (Prerequisite: MBA 320)

MBA 323 REAL ESTATE

This course covers the analysis and valuation of real estate investments, focusing on the selection and financing policies for real property investments, which are shaped by spatial, legal, governmental, and tax factors. (Prerequisite: MBA 320)

MBA 324 INTERNATIONAL FINANCE

Problems encountered by financial managers in corporations having international financial functions. Topics covered include: managing foreign exchange risk, international capital budgeting, and financing in a global market. (Prerequisite: MBA 320)

MBA 325 FINANCIAL INSTITUTIONS

The role of banks and nonbank financial intermediaries in an advanced industrial economy is analyzed. Topics include: the study of financial markets and institutions, the major financial intermediaries in the U.S. economy, interest rates and how they are set, government regulatory policies for financial institutions, and the impact of recent institutional and legislative changes on financial intermediaries. (Prerequisite: MBA 320)

MBA 326 CORPORATE RISK MANAGEMENT

Corporations face a wide variety of risks in areas such as finance, product liability, and damages to both human-made and natural resources. This course enables students to identify and manage these risks by providing a theoretical framework (Expected Utility Theory) for optimal decision making under uncertainty. Particular attention is paid to identifying and correcting judgmental biases in risk decision making. Students develop expertise in the use of a wide range of traditional and innovative risk management strategies, including: insurance purchasing, financing strategies, hedging strategies (i.e., use of forwards, futures, and option contracts), and changes in organizational size and form. (Prerequisite: MBA 320)

MBA 327 DERIVATIVE SECURITIES: FUTURES, SWAPS, AND OPTIONS

Since the 1970s, the U.S. and world financial and commodity markets have experienced substantial, unexpected variations in the level of market-clearing prices. Financial instruments known as derivative securities have evolved over the past twenty years to cushion the financial risks associated with such unexpected price changes. Students learn to value such derivative securities and to combine them to achieve hedging or speculative objectives. (Prerequisite: MBA 320)

MBA 328 TAX STRATEGIES AND MANAGEMENT DECISIONS

The fundamentals of individual and corporate taxation are covered, including an analysis of tax policy, structure, legal hierarchy and procedure, as well as a discussion of tax aspects of the various common forms of business organization, and an examination of tax considerations in implementing employee benefit plans. The basic foundations of international tax are addressed. Cases emphasize the necessity of considering the impact of federal taxes in management decisions. Students perform a tax compliance and planning project.

MBA 330 ORGANIZATION BEHAVIOR

This course focuses on how people behave as members of organizations, with a special emphasis on theory and research of individual and group behavior and processes. Topics include interpersonal relations and communications, motivation, group structure and processes, and leadership. The implications of crosscultural differences for management behavior in today's global organizations are explored, as are the legal and interpersonal issues associated with managing a diverse workforce. A variety of techniques are used to enhance skill development, including self-assessment instruments, case discussions, role plays, and simulations.

MBA 331 ORGANIZATION STRUCTURE AND PROCESS

The basic nature of social interaction is examined to introduce a variety of perspectives on organization theory and to apply those concepts to actual business problems. Topics covered include: the structure of organizations, normative organizational patterns, organizational processes (decision making, communications, etc.), and the relationship of these topics to factors such as size, complexity, technology, and environmental influences. (Prerequisite: MBA 330)

MBA 332 WOMEN AND MEN IN MANAGEMENT

The infusion of women into nontraditional professions and management positions has led to changes in the interactions of women and men in work settings. The purpose of this course is to examine the problems that arise in male-female work relationships, the sources of these problems—individual, organizational, societal—and possible solutions to them. Topics to be covered include sex differences, sex-role development, career choice and mobility, work group and superior-subordinate interactions, use of power, career development, affirmative action programs, and strategies for achieving organization-wide change. (Prerequisite: MBA 330)

MBA 333 CAREER DEVELOPMENT

Skillful career management is vital to both professional success and personal satisfaction. This course helps students develop career management skills that are appropriate to any level of career development, from making initial career decisions to later career changes. Self-assessment instruments, exercises, and cases are used throughout the course. Topics include self-assessment, career decision making, job search strategies, organizational assessment, and socialization processes. (Prerequisite: MBA 330)

MBA 334 HUMAN RESOURCE MANAGEMENT

Faced with pressures from the work force, increasing international and domestic competition, and government regulations, corporations must continually re-evaluate employment policies and practices. Managers must ensure that an organization's competitive strategy is compatible with the needs and concerns of personnel. This course covers general areas of human resource management, such as job analysis, recruitment, management development, performance appraisal and selection, training and development, labor relations, collective bargaining, and compensation.

MBA 335 INDUSTRIAL RELATIONS

Broadly defined, industrial relations refers to the relationships between employees, unions, and employers. This course serves as an introduction to the concepts, theories, and practice of labor-management relations. Topics include: the development of the trade union movement; the structure, practices, and outcomes of collective bargaining; the administration of the collective bargaining agreement; dispute resolution procedures; and the evolution of public policy toward labor relations.

MBA 336 COLLECTIVE BARGAINING

Collective bargaining is a process by which representatives of labor and management seek agreement on the terms and conditions of employment. The public often has a vested interest in the process, especially when conflicts over terms of employment cannot be resolved at the bargaining table. Topics covered include the evolution of bargaining, theories of bargaining power and behavior, and relevant legislative frameworks. The range of bargaining issues is described, along with variations in bargaining structures. The grievance procedure is examined with respect to the application and interpretation of agreements. Students participate in a collective bargaining simulation.

MBA 340 MARKETING MANAGEMENT

Topics include market segmentation, consumer behavior, product development, product life cycles, promotion, pricing, and distribution. Emphasis is on the development of specific marketing strategies in a constantly changing social and business environment. Also discussed are international marketing, marketing to a diversity of cultures and subcultures, marketing ethics, governmental regulation and the legal implications of marketing. (Prerequisites: MBA 301 and 302)

MBA 341 MARKETING RESEARCH

This course provides fundamental knowledge of how and why marketing research is used to solve marketing problems. Taking a managerial perspective, the course emphasizes research for marketing consumer goods and services. Topics include: problem identification and definition, research design, questionnaire design and construction, project implementation, sampling, data collection and interpretation, and presentation and reporting of research findings. Students may undertake research projects for actual clients. (Prerequisite: MBA 340)

MBA 342 SALES AND SALES MANAGEMENT

Sales management integrates personal selling and marketing management, with an emphasis on relationship selling. The course focuses primarily on industrial sales rather than retail sales. Topics include: techniques of personal selling; recruiting, training, organizing and motivating the sales force; compensation; forecasting; budgeting; and control. Legal and ethical issues are discussed. (Prerequisite: MBA 340)

MBA 343 MARKET PRICING

A pricing strategy should be consistent with and reflect overall company objectives. Companies can use pricing strategies to gain market share, meet profit goals, or maintain the status quo. Companies may pursue more than one pricing objective at the same time and often re-examine pricing strategy in light of changes in the competitive environment. This course presents a management approach to pricing products and services in consumer, industrial, and "reseller" markets. Topics include: bargaining tactics, bidding strategies, pricing product lines for complex channels of distribution, life cycle and learning curve pricing, and intrafirm transfer pricing. (Prerequisite: MBA 340)

MBA 344 CONSUMER AND INDUSTRIAL BUYER BEHAVIOR

Understanding consumer behavior is essential to defining and maintaining a market. This course examines the purchasing behavior of individuals and groups. Topics include: complex decision-making models, buying habits, attitude theory, and the buying behavior of organizations. (Prerequisite: MBA 340)

MBA 345 INTERNATIONAL MARKETING

The challenges companies encounter as they enter international markets are examined. The text and readings explore marketing problems facing joint venture and multinational firms, as well as the exporter and licensor. A range of marketing activities is covered in the context of international operations, including marketing research, product policy, pricing, distribution, promotion, planning, organization, and control. (Prerequisite: MBA 340)

MBA 346 SERVICES MARKETING

Highly competitive markets for profit and nonprofit service organizations require strict attention to the production/marketing interface, as well as to the traditional marketing mix. This course focuses on the marketing implications of service intangibility, the inseparability of production and consumption, and conflicting server roles. These problems apply to a wide array of service organizations, including retailing and health care. Current models of the service organization are presented with insight developed through readings, cases, and interviews. (Prerequisite: MBA 340)

MBA 347 BUSINESS-TO-BUSINESS MARKETING

Organizations that market to other organizations encounter different problems than those that market to consumers. Business-to-business marketing is the marketing of goods and services to commercial enterprises, governments, and nonprofit institutions. Emphasis is on buyer behavior and the more complex decision-making processes of organizations. Topics covered include industrial market segmentation, product development, pricing, personal selling, promotion, and distribution. Additional topics are direct marketing, research and development, purchasing, and corporate planning. (Prerequisite: MBA 340)

MBA 348 ADVERTISING AND PROMOTION

Promotion, a component of the marketing mix, is any form of communication intended to inform, persuade, or remind people of products or services. Advertising is any form of impersonal communication of ideas, goods, or services paid for by an identified sponsor and is one of the major types of promotion. The course focuses on advertising and publicity as the most common and useful forms of promotion. The course integrates international, legal, and ethical aspects of promotion and covers topics such as media selection, public relations, and personal selling. (Prerequisite: MBA 340)

MBA 349 PRODUCT MANAGEMENT

The objective of this course is to prepare students to be effective product managers. Product managers are responsible for sales and are the champions of their product lines. They develop marketing plans, see that they are implemented, monitor results, and take corrective action. Product management requires conceptual and decision-making skills in product portfolio decisions, new product development, product positioning and promotion, and product modification. (Prerequisite: MBA 340)

MBA 350 MANAGEMENT INFORMATION SYSTEMS

One of the most important aspects of computing, management information systems has had a significant impact on both operations and strategy. Information systems are used at all levels of management to achieve competitive advantages and to create new opportunities, products, and services. The objective of this course is to provide basic knowledge of the field of information systems. Topics include hardware, software, database management, data communication, systems analysis and design, and functional application areas, such as medicine, accounting, and manufacturing.

MBA 351 INTRODUCTION TO DATABASE DESIGN

This course examines the role of information systems within the organization. Recent developments in theory and practice in M.I.S. are emphasized, including conceptual foundations of information systems, office automation, decision support systems, the factory of the future, artificial intelligence and expert systems, and the management of information. An independent project is required. (Prerequisite: MBA 350)

MBA 352 DECISION SUPPORT SYSTEMS

Optimization models have the potential to solve a wide range of management problems. Application of the models in today's business environment, however, requires robust, microcomputer-based, decision-aiding software. In this course, students learn how companies such as IBM have developed and used optimization-based decision support systems to solve real-world problems. (Prerequisite: MBA 360)

MBA 360 OPERATIONS MANAGEMENT

Operations management is the study of the efficient use of resources to create goods or services that satisfy the needs of customers and clients. In both the profit and nonprofit sectors, successful management requires economically rational decisions about the design and operation of processes that transform resources into goods or services. This course develops students' abilities to identify and structure operating problems, and to identify appropriate techniques for resolving them. Topics covered include: modeling concepts and LP modeling/solution methods, basic forecasting methods, location selection, inventory management, MRP, JIT, quality management/assurance, project management and control. (Prerequisites: MBA 299, 302, 350)

MBA 361 OPTIMIZATION FOR MANAGERS

This course provides an overview of important, practical tools used to solve management problems. Explanation of the fundamental ideas behind these techniques will help students apply them intelligently and flexibly to real-world situations. Examples of optimization techniques are: heuristics, simulation, shortest path, network models, and dynamic programming. Because of desktop computers and user-friendly software, managers can now use these techniques themselves—a particularly attractive feature for small, entrepreneurial firms. (Prerequisite: MBA 360)

MBA 362 APPLIED BUSINESS FORECASTING

Accurate forecasts—of sales revenues, quantities sold, prices, production capacity, market size and share, inventory levels, personnel requirements, and many other business measures—are important for making good management decisions. Applied forecasting projects are drawn from marketing, finance, economics, organizational behavior, strategy, and operations management to illustrate methodologies. Forecast projects are drawn from current local businesses or a special field of interest. Topics include: forecasting with simple and multiple regression; time series analysis, including classical and A.R.I.M.A. methods; and exponential smoothing models. (Prerequisite: MBA 302)

MBA 363 WORLD-CLASS MANUFACTURING SYSTEMS

To compete in the growing international marketplace, firms must be able to compete on the basis of manufacturing costs, productivity, and product quality. Production managers face complex decisions as they try to balance productivity and quality against cost. This course compares traditional manufacturing methods and emerging trends, such as Just-In-Time, Flexible Manufacturing Systems, Total Quality Management, and Computer Integrated Manufacturing. (Prerequisite: MBA 360)

MBA 370 MANAGERIAL COMMUNICATIONS

This course is designed to help managers communicate with confidence by showing them how to prepare clear, concise memos, letters, reports, and proposals, and to deliver effective oral presentations. Through active class participation and in-class writing exercises, students develop confidence in their ability to communicate effectively.

MBA 371 GENERAL MANAGEMENT

Students analyze general management problems from a variety of industries and types of organizations. Written reports and oral presentations are critiqued by a panel of faculty members and managers. Presentations are video taped, and reviewed for content and style. The course is team taught using cases and lectures/discussions. (Prerequisites: all foundation and functional courses)

MBA 372 INTERNATIONAL MANAGEMENT AND GLOBAL COMPETITION

Managers of companies that operate in international markets face economic, legal, political, and social problems that are not encountered by companies that operate only in domestic markets. This course focuses on the interaction of the manager with various constituencies, and aspects of an international/multinational firm. (Prerequisites: MBA 301 and 330)

MBA 373 BUSINESS LAW AND REGULATORY POLICY

The legal framework within which U.S. businesses operate determines both the rights and obligations of persons taking part in business transactions. Through case studies and selected readings, this course emphasizes areas of the law commonly encountered by business managers: contract negotiation and provisions, the Uniform Commercial Code, government regulations, consumer protection, and tort liability.

MBA 374 BUSINESS IN SOCIETY

The contemporary manager is confronted with decisions complicated by social, political, technological, legal, and ethical issues. This course examines the themes that underlie managerial decision making: core values and assumptions at the foundation of the U.S. business subculture, ethical issues that arise in the context of management decisions, and the impact of political environments on management decisions. Throughout the course, students consider and discuss the views of practicing managers. (Prerequisites: MBA 330 and 340)

MBA 375 BUSINESS POLICY

This course focuses on the organizational processes for selecting and executing an appropriate competitive strategy. Its objectives are: to develop skills for evaluating the impact of internal and external forces on an organization's strategic choices, to enhance understanding of unstructured decisions, to understand the relationship between corporate cultures and competitive strategies, and to assess the nature and importance of global strategies. (Prerequisites: MBA 320, 330, 340, 360, 370, 371)

MBA 377 NEW VENTURE MANAGEMENT

The problems encountered in planning and developing a new business venture are studied. This course emphasizes the skills needed to analyze existing markets and identify unexploited business opportunities. Topics include:

developing business plans, identifying financing strategies, and managing start-up operations. Students are exposed to entrepreneurial organizations and problems through case studies, field consultations with small-business managers, and class presentations by entrepreneurs. (Prerequisites: MBA 320, 330, 340)

MBA 378 NEW VENTURES SEMINAR

Each week, students meet with founders and managers of new business ventures and executives in venture capital companies. Seminar speakers discuss the creation and management of new business ventures, stressing the differences between managing in new organizations and established bureaucracies. At the conclusion of each speaker's presentation, students join the speaker and seminar leader for a continuation of the discussion over dinner. Admission to the seminar is determined on the basis of the student's academic achievement at Clark. (Prerequisites: foundation and functional courses)

MBA 379 STRATEGIC MANAGEMENT OF TECHNOLOGY

This course focuses on the technology dimension of competitive strategies and strategy-making processes. Through cases and readings, strategic management concepts are used to analyze those critical points where technology intersects other processes and functions of the business firm. The perspective taken is that of the non-technically trained manager dealing with technology issues of strategic importance to the firm. (Prerequisites: MBA 320, 330, 360)

MBA 381 MANAGEMENT CONSULTING PROJECTS

Students are assigned projects provided by a variety of profit and nonprofit organizations in central Massachusetts and Boston. Teams of three to four second-year MBA students are invited to work in these organizations as "consultants in training." Working with guidance from Clark faculty members and managers from the host organizations, the student teams analyze their assigned projects and recommend courses of action. Management, in turn, critically evaluates and responds to the students' analysis and recommendations in much the same manner that they respond to proposals from their own staff. (Prerequisites: foundation and functional courses)

MBA 391 DIRECTED READINGS IN MANAGEMENT

Individual instruction under the sponsorship of a faculty advisor is offered for one course credit. This course is restricted to topics not covered within other courses in the MBA curriculum. A faculty sponsor and the permission of the assistant dean for academic affairs are required.

MBA 392 DIRECTED RESEARCH IN MANAGEMENT

Independent research on selected topics in management can be taken for one course credit with a faculty sponsor's approval and the approval of the assistant dean for academic affairs.

MBA 394 SPECIAL TOPICS

Occasional and special-purpose courses in management.

■ THE MASTER OF HEALTH ADMINISTRATION PROGRAM

Reflecting the administrative and technological complexity of today's health systems, the Master of Health Administration Program combines the resources of Clark's Graduate

School of Management and the Department of Family and Community Medicine of the University of Massachusetts Medical School in Worcester. The program prepares graduate students for management careers in a wide range of health services and settings.

The Clark/UMass M.H.A. Program is oriented toward students with significant work experience in any health field. However, exceptionally qualified applicants without sufficient experience in the health professions are admitted; exposure to management in the health field is required of such students and is arranged by the director of the M.H.A. Program.

The program's faculty from Clark and the University of Massachusetts Medical School have professional and research experience in health and medical care administration, community health services, and management.

The UMass Medical School, located in Worcester, offers the following health science degree programs: M.D., Ph.D. in Medical Sciences, M.S. in Nursing (M.S.N.), and M.P.H. in Epidemiology.

The principal library resource for the M.H.A. Program is the Lamar Soutter Library of the UMass Medical School, a health sciences library with more than 120,000 volumes, 2,900 journal subscriptions, 22,000 units of microfilm, and 1,900 audiovisual items.

Curriculum

The M.H.A. curriculum consists of nineteen courses, grouped into the following five categories:

Prerequisite Course

MBA 299 Mathematics for Managers (not for credit)

Required Courses

MHA 320 Health Systems
MHA 330 Principles of Epidemiology
MHA 350 Economic Aspects of the Medical Care Industry
MHA 360 Legal and Ethical Aspects of Health Care Administration
MHA 370 Financial Management of Health Care Organizations
MBA 302 Statistical Methods
MBA 310 Foundations of Accounting
MBA 330 Organization Behavior
MBA 340 Marketing Management
MBA 350 Management Information Systems

Capstone Courses

MHA 380 Health Policy
MHA 390 Health Care Management

Required Field Project

MHA 400 Applied Field Project or
MHA 400A Expanded Applied Field Project

Electives (five required)

MHA 340 Health Care Strategic Planning
MHA 382 Hospital Administration
MHA 383 Ambulatory Care Administration
MHA 384 Health Care Quality Improvement
MHA 389 Women in the Health Care System
MHA 394 Special Topics in Health Services Management
MHA 399 Directed Readings in Health Services Management
MBA 334 Human Resource Management
MBA 346 Services Marketing

Students begin the M.H.A. Program by taking the prerequisite course and the ten required background and core courses. The capstone courses, Health Policy (MHA 380) and Health Care Management (MHA 390), should be taken after the ten other required courses.

In addition to the five electives, each student completes an Applied Field Project (MHA 400), a faculty-supervised independent study designed to demonstrate the student's ability to apply health administration concepts to a problem of his or her choice. A top-level health care manager serves as an advisor on each project. Students without significant health services management experience are required to complete the Expanded Applied Field Project (MHA 400A), which includes considerable exposure to management practices. Students are expected to complete MHA 400 (or MHA 400A) within one semester. Otherwise, the student must register for the course again in the following semester and pay half tuition.

Meeting Times

Clark operates on a semester system. During the fall and spring semesters, classes are held from 9 a.m. until noon and from 1 p.m. until 4 p.m. at the Clark campus. Classes meet from 6 p.m. to 9 p.m. at Clark, in Westborough at the Massachusetts Microelectronics Center (M2C), a half mile from the intersection of Route 9 and Route 135 West, and at the UMass Medical School at the intersection of Plantation Street and Route 9. Classes meet once a week, on Monday, Tuesday, Wednesday, or Thursday. One summer session is held, with classes meeting twice weekly in the evening from mid-May to the end of June in Worcester and Westborough, and in the afternoon in Worcester.

For scheduling details, students should consult the registration booklet distributed before the start of the fall semester.

ACADEMIC POLICIES

General Graduation Requirements

Candidates for the M.H.A. degree must meet the requirements of nineteen courses: one prerequisite course, ten required, two capstone courses, five electives, and an applied field project. Students must take a minimum of ten courses to meet the residency requirement of the Clark/UMass M.H.A. Program. Students usually are permitted a maximum of six years from the date of their initial enrollment in the M.H.A. Program to complete all requirements for the degree. The minimum grade-point average required for graduation is 3.0 (B).

Course Waivers

Students may apply for waivers from eight of the nineteen courses required for graduation. Courses that may be waived are MBA 299, MBA 302, MBA 310, MBA 330, MBA 340, MBA 350, MHA 320 and MHA 330.

Course waivers are based on transcript reviews and/or examinations and are granted by the Clark/UMass M.H.A. faculty. Generally, a waiver reduces the number of courses the student must take. Typically, a waiver is granted when an entering student presents evidence of having passed an equivalent graduate-level course, or two or more baccalaureate courses, with grades of B or better in the relevant subject area. Waivers will depend in part on how recently a substitute course was taken. Students who wish to receive waivers should submit a completed Request for Course Waiver form to the director of the M.H.A. Program. Regardless of the number of courses transferred or waived, M.H.A. candidates must pass a minimum of ten courses in the Clark/UMass program.

Transfer Credit

Students enrolled in the M.H.A. Program may receive transfer credit for post-baccalaureate work. The nineteen-course requirement may be reduced by no more than two courses for students with appropriate graduate-level credits. Transfer credit is assigned only to elective courses. Grades of B or better are required for course work recently completed at schools accredited by the American Assembly of Collegiate Schools of Business (A.A.C.S.B.) or the Accrediting Commission on Education for Health Services Administration (A.C.E.H.S.A.). Transfer credit also may be granted by examination for course work completed at unaccredited programs or taken more than five years before the date of application for transfer credit.

Transfer credit can be granted for courses taken after the student has enrolled in the M.H.A. Program, but prior approval of the faculty is required. Usually, approval is granted only for appropriate course work that is not available at Clark/UMass.

Other Policies

Policies governing the use of grades and leaves of absence are the same as those described for the M.B.A. program.

M.H.A. Program Accreditation

The joint Clark University/University of Massachusetts Medical School M.H.A. Program is accredited by the Accrediting Commission on Education for Health Services Administration (A.C.E.H.S.A.). A.C.E.H.S.A. was organized in 1968 and has, as of June 1991, accredited sixty graduate programs in the United States and Canada. The commission has seven corporate members:

The American College of Health Care Administrators (A.C.H.C.A.),
The American College of Healthcare Executives (A.C.H.E.),
The American College of Medical Group Administrators (A.C.M.G.A.),
The American Hospital Association (A.H.A.),
The American Public Health Association (A.P.H.A.), and

The Association of University Programs in Health Administration (A.U.P.H.A.); a joint seat is shared between the Canadian Hospital Association (C.H.A.) and the Canadian College of Health Service Executives (C.C.H.S.E.).

There also is one consulting member, the Association of Mental Health Administrators (A.M.H.A.). A.C.E.H.S.A. has been accorded formal recognition by the Council on Postsecondary Accreditation and the U.S. Department of Education.

■ COURSES

(Refer to Graduate School of Management Catalog for more information.)

MBA 299 MATHEMATICS FOR MANAGERS (SEE MBA COURSES)

MBA 302 STATISTICAL METHODS (SEE MBA COURSES)

MBA 310 FOUNDATIONS OF ACCOUNTING (SEE MBA COURSES)

MBA 330 ORGANIZATION BEHAVIOR (SEE MBA COURSES)

MBA 334 HUMAN RESOURCE MANAGEMENT (SEE MBA COURSES)

MBA 340 MARKETING MANAGEMENT (SEE MBA COURSES)

MBA 346 SERVICES MARKETING (SEE MBA COURSES)

MBA 350 MANAGEMENT INFORMATION SYSTEMS (SEE MBA COURSES)

MHA 320 HEALTH SYSTEMS

This should be one of the first courses taken in the M.H.A. Program, because it provides a framework that enables students to understand the contributions other required courses make to health system management. Initially, this course examines input-throughput-output models of health systems and covers the information necessary to understand the components and links that are involved. It then uses the systems approach to identify key issues in various health service sectors, such as primary care, hospital services, and high-technology services. Discussions and student papers focus on key issues related to health systems in the United States and other countries.

MHA 330 PRINCIPLES OF EPIDEMIOLOGY

Epidemiology focuses on understanding disease in human populations. This course focuses on the managerial uses of epidemiology, and covers the basic principles and skills used by the epidemiologist to discover and explain the distribution and determinants of disease. These include: description of disease by person, place, and time; principles of study design; and analysis and interpretation of epidemiological data. To help students learn to evaluate studies critically, the course also provides concepts useful in evaluating health programs.

MHA 340 HEALTH CARE STRATEGIC PLANNING

Health care managers must constantly assess how well their institutions are meeting community needs in today's rapidly changing health care marketplace. Community health planning, strategic planning, and marketing all involve interrelated concepts and methods important for such assessments. This course focuses on planning practice and includes an in-depth examination of the following topics: systems diagnosis and problem assessment; goal and priority setting; cost/effectiveness studies; and program development, implementation, and evaluation. Health status, service, and resource-based planning approaches are covered for both institutions and area-wide health systems. The course also analyzes actual plans.

MHA 350 ECONOMIC ASPECTS OF THE MEDICAL CARE INDUSTRY

The planning, regulation, and delivery of health services in the United States are constantly changing, largely in response to economic forces. This course introduces students to the basic concepts of macroeconomics and microeconomics, then examines economic aspects of the health service system in terms of production, distribution, and institutional structure. Topics include: determination of demand for medical care, financing, delivery mechanisms and their effects, and the medical manpower market. The role of government planning and regulation of the medical care industry is also studied. Particular emphasis is given to an economic analysis of the major proposals to restructure the U.S. medical care system. (Prerequisite: MBA 302)

MHA 360 LEGAL AND ETHICAL ASPECTS OF HEALTH CARE ADMINISTRATION

When making decisions, health care managers are often confronted with legal and ethical issues. This course introduces students to these issues and provides a variety of conceptual frameworks for resolving management problems. This course uses an interactive approach in which the learner is challenged to apply these concepts to case studies and personal experience.

MHA 370 FINANCIAL MANAGEMENT OF HEALTH CARE ORGANIZATIONS

As the efficient allocation of resources became a critical problem in health care organizations, control and financial decision making became increasingly sophisticated. The objective of this course is to provide students with a working knowledge of selected financial and management control techniques pertaining to cost accounting, pricing, productivity, operations, and capital budgeting, as well as working capital and long-term capital. (Prerequisites: MHA 320, 350; MBA 302, 310)

MHA 380 HEALTH POLICY

Health care managers develop and implement policies for their institutions and often do so for communities, states, and even nations. These decisions involve a synthesis of the various disciplines represented in the M.H.A. curriculum, as well as an understanding of institutional and governmental policy-making processes. This capstone course centers around case studies, including many "living case studies" presented in class by health care executives who share problems from personal experience. This course involves a high level of student participation. Topics for Applied Field Project (MHA 400) are often suggested. (Prerequisites: required courses)

MHA 382 HOSPITAL ADMINISTRATION

Since most health care expenditures go to hospitals, this sector of the health system interests many health care managers. Specific topics include: organizational structure, management and medical staff relations, the role of the governing body, plant and equipment management, hospital and physician reimbursement, and operational and strategic issues. This course covers administration of many types of hospitals, from university teaching hospitals to small rural hospitals. (Prerequisites: MHA 320, 370; MBA 302, 310, 330)

MHA 383 AMBULATORY CARE ADMINISTRATION

Ambulatory care is among the fastest growing sectors of the U.S. health system. This growth is occurring in a variety of organizational settings, including free-standing health centers, health maintenance organizations, and hospital outpatient departments. Planning and managing this growth is a challenge for the ambulatory care manager. This course addresses both the health policy environment that promotes ambulatory care and internal management issues in ambulatory care organizations. Case studies reflect a variety of ambulatory care institutions and management problems. (Prerequisites: MHA 320, 370; MBA 302, 310, 330)

MHA 384 HEALTH CARE QUALITY IMPROVEMENT

The development of quality improvement programs in health institutions is covered, with an emphasis on the theory and methods of Total Quality Management and Continuous Quality Improvement as applied in health care and other industries. Case studies of hospital quality improvement are used. Students also analyze actual hospital data and write papers on the results. (Prerequisites: MHA 320; MBA 302, 310, 330)

MHA 389 WOMEN IN THE HEALTH CARE SYSTEM

This course explores the position and role of women in the U.S. health care system. It focuses at the aggregate level on women as patients, providers of health care, research subjects, and managers in health care organizations. Each topic is reviewed and discussed based on its implications for the process and content of health care management or health policy. This course exposes students to literature that describes and conceptualizes 1) women in their various roles in the health care system and 2) how the health care system identifies and meets women's need for health services. (Prerequisites: MHA 320; MBA 330)

MHA 390 HEALTH CARE MANAGEMENT

Improving the effectiveness of complex health care organizations is the challenge of health administration. To do so, the manager must understand the relationships among corporate strategy, organizational structure and process, and internal management systems. This course covers managerial issues such as strategic management, the job of the manager, organizational culture, organizational processes, leadership, decision making, and implementation. (Prerequisites: required courses).

MHA 394 SPECIAL TOPICS IN HEALTH SERVICES MANAGEMENT

This course gives students the opportunity to address an important topic in health services management in-depth in a seminar setting. (Prerequisites: MBA 302, 310, 330; MHA 320)

MHA 399 DIRECTED READINGS IN HEALTH SERVICES MANAGEMENT

Students may design a directed readings course with individual faculty members to develop in-depth knowledge about a particular aspect of health care management. A faculty member's written approval of the specific topic is required before registration is permitted.

MHA 400 APPLIED FIELD PROJECT

A faculty-supervised independent study designed to demonstrate the student's ability to apply health administration concepts.

MHA 400A EXPANDED APPLIED FIELD PROJECT

A faculty-supervised independent study designed to demonstrate the student's ability to apply health administration concepts. This course gives students without management experience additional exposure to management practices.

Mathematics and Computer Science

■ DEPARTMENT FACULTY

Lee Rudolph, Ph.D., chair: low-dimensional topology, algebraic geometry

Kenneth J. Basye, Ph.D.: artificial intelligence, robotics

Arthur Chou, Ph.D.: differential geometry, theoretical computer science

Frederic Green, Ph.D.: computational complexity, theory of computation

David Joyce, Ph.D.: algebraic topology, combinatorics, computer science

John F. Kennison, Ph.D.: topology, category theory

Lawrence E. Morris, Ph.D.: automorphic representations, algebraic geometry

Natalia Sternberg, Ph.D.: applied mathematics, differential equations, scientific computing

■ UNDERGRADUATE PROGRAMS

The department supports undergraduate majors and minors in computer science and in mathematics. The computer science program is described elsewhere in this catalog, under the heading "Computer Science." The mathematics major and the mathematics minor are described below. The department also offers courses that play an important service role in other disciplines.

■ THE MATHEMATICS MAJOR

In keeping with the liberal arts tradition, the mathematics major at Clark aims to provide a solid education in mathematical principles both for the student who wishes to apply mathematics in the everyday world, as well as for the student who wishes to proceed to graduate school in mathematics itself. In recent years, mathematics majors from the department have been accepted for graduate studies at schools such as Brown, Cornell, Colorado, Maryland, Oregon, and Yale universities in mathematics, computer science, and economics. In addition, our graduates have been employed by the public and private sectors in statistics, mathematical modelling, and actuarial science, as well as in education, etc.

The mathematics major is built around a core of fundamental courses. It is important to begin the major early. Calculus and the core courses should be taken as soon as possible. The advanced electives provide some flexibility and allow students to tailor the major to their needs. Following the description of the requirement there are suggestions for concentrations in pure mathematics, applied mathematics, and actuarial science.

■ DECLARING A MAJOR AND CHOOSING AN ADVISOR

The department has an advising system to assist students with course selection. A student must declare his or her major no later than the end of the sophomore year. At the time a major is declared, the student should select an advisor from the department faculty, who will sign the "declaration of major" form provided by academic advising. This advisor will help the student design the best program of courses to suit his or her goals. A department form also is completed at this time and kept on file at the department office.

REQUIREMENTS

Core Courses:

These courses are prerequisites for the advanced courses and therefore should be taken as soon as possible.

- Calculus (Math 124, 125 or Math 120, 121) two courses (Math 110, 111, 112 also may be used)
- Linear Algebra (Math 130) one course
- Multivariate Calculus (Math 131) one course
- Intro to Modern Analysis (Math 172) one course

Breadth Courses

- Modern Algebra (Math 225) one course
- Two math electives (Math 103, 104, 105, 106, 114 or any courses beyond Math 125) two courses

Depth Courses

Four (4) additional courses at the 200 level, one being a capstone course to be worked out with the major advisor (Internships and reading courses will meet this requirement only with departmental approval). four courses

Total twelve courses

SUGGESTED SPECIALIZATIONS IN MATHEMATICS

Pure mathematics is the study of mathematics for its own sake. Many students are originally attracted to mathematics because of its powerful applications, but a taste for pure mathematics often develops after studying the subject. Students planning to study mathematics in graduate school should consider programs in either pure or applied mathematics. Suggested courses include Math 214, Modern Analysis; Math 216, Complex Analysis; Math 226, Modern Algebra II; and Math 228, Topology.

Applied mathematics is the study of mathematics for its applications to the natural or social sciences. The key to applied mathematics is the modelling of natural or social phenomena by mathematical techniques including differential equations, linear systems, and stochastic processes. Suggested courses include: Math 212, Numerical Analysis; Math 164, Mathematical Models; Math 214, Modern Analysis; Math 216, Complex Analysis; Math 217-218, Mathematical Statistics; and Math 244, Differential Equations.

Actuarial science is the study of finance and insurance. Study in this field requires a firm grounding in mathematics and statistics and an understanding of economics and business management. Suggested courses include: Math 164, Mathematical Models; Math 213, Math 217-218, Mathematical Statistics; Math 244, Differential Equations; and courses in economics or business management.

HONORS PROGRAM

Majors in mathematics who maintain at least a 3.2 average (4.0 scale) in courses required for their major may apply for the departmental honors program. Application in writing must be received by the end of the junior year by a prospective honors advisor or by the chair of the department. Honors may be achieved in one of two ways:

1. A unified four-course sequence as a senior (some parts of which may consist of readings courses), followed by a comprehensive examination.

2. An honors thesis is to be presented at an oral defense or at a department seminar. This thesis may be an independent or joint research project, or an analytic dissertation. Supporting course work may be required. The student registers for Math 299, sec. 8 for course credit for an honors thesis.

Upon satisfactory completion of the program, the department may recommend graduation with honors, high honors, or highest honors.

THE MATHEMATICS MINOR

The mathematics minor consists of one year of calculus (Math 110-112, Math 120-121, or Math 124-125); Math 130, Linear Algebra; Math 131, Multivariate Calculus; and two other math courses, numbered beyond Math 100. (Reading courses and internships are accepted only on approval by the department.) The exact two elective courses would depend on the student's interest. For instance, a student interested in the physical sciences could take Math 172, Introduction to Modern Analysis, and Math 244, Differential Equations, while Math 217-218, Mathematical Statistics, would be more appropriate for social sciences. Please see the department for further suggestions.

SECONDARY EDUCATION CERTIFICATE IN MATHEMATICS EDUCATION

The requirements for this certificate include courses in education and courses in mathematics. The mathematics courses include Calculus (Math 110-112, 120-121, or 124-125), Theory of Numbers (Math 104), Geometry (Math 128), Statistics (Math 217-218), and 200-level mathematics courses to bring the total number of mathematics courses to nine. See the Education department section elsewhere in this catalog for required courses in education and more information on the program.

MATHEMATICAL SERVICES

The department offers courses to meet the needs of students who will be using mathematics as a tool for studying other areas. Math 015, Elements of Mathematics, is a noncredit course covering elementary concepts needed for Math 018. Math 018, Problem Solving with Algebra, reviews basic algebraic skills and applications to concrete situations. This course includes background for various departmental quantitative methods and statistics courses as well as for Math 110, Functions and Calculus I.

CALCULUS SEQUENCES

Knowledge of calculus is essential for any serious student of the natural sciences or mathematics. It also is used heavily in economics and has been applied extensively in other disciplines.

There are three calculus tracks:

Math 110, 111, 112	*Functions and Calculus*
Math 120, 121	*Calculus (Regular)*
Math 124, 125	*Honors Calculus*

Generally speaking, if a full year of calculus is required, then any of the above sequences may be used. If one semester of calculus is required, then either Math 124 or Math 120, or the two-semester sequence—Math 110, 111—would be appropriate.

Students will normally start calculus with Math 120, Calculus I, or Math 124, Honors Calculus; both open to first-year students who pass the placement test. Students with less preparation are advised to take Math 110, Functions and Calculus, and continue with Math 111. Strong students are urged to start with Honors Calculus, Math 124. This is usually a better option than omitting calculus, even if sufficient achievement is shown on the advanced placement test given in high school.

MATHEMATICS PLACEMENT TEST

Based on an assessment of admissions records, some new students will be required to take the mathematics placement test, which will determine whether they will need to take IDND 017 (Foundations of Quantitative Thinking) prior to enrolling in a formal analysis course.

In addition, any new students who plan to take mathematics courses should take the mathematics placement test. The test is given during (or prior to) orientation and preregistration weeks. (Other diagnostic tests also are available for students who are uncertain about which courses to take.) The placement test will place students in one of five levels: Math 015, Math 018, Math 110, Math 120, or Math 124. Students may challenge their placement by this test by taking backup placement tests. Students with advanced placement credit in calculus are exempt from the placement test.

GRADUATE PROGRAM

Consult the department regarding the most current status of this program. The department offers courses leading to the degrees of master of arts and doctor of philosophy in mathematics. The requirements for the M.A. are:

1. ten full courses, at least eight of which must be on the 300 level. These courses usually include one or two full courses of Math 330, the writing of the master's thesis. They may include seminars and reading courses;
2. the basic courses, Math 316, 318, and 325. Each of these requirements may be waived for a student presenting evidence satisfying the department of his or her knowledge of the material in question;
3. a master's thesis; and
4. an oral examination.

A student working toward a Ph.D. degree and electing to omit the M.A. thesis and M.A. oral examination will be recommended for the M.A. degree upon successful completion of the Ph.D. preliminary examination.

The requirements for the Ph.D. follow the general requirements of the graduate school. The Ph.D. preliminary examination is usually given orally but may be written under certain circumstances. Students should consult with their advisors by November of the second year. Students entering with a master's degree should discuss the examination with a department advisor immediately. Failure to take this examination at the appropriate time may result in the department not recommending a student for continued support. Scholarships, graduate instructorships, and new courses are subject to final approval by the Graduate Board.

The language requirement will be considered to have been fulfilled if the candidate can demonstrate sufficient linguistic ability to carry on effective research in his or her field. The department's decision concerning this requirement will depend heavily upon the recommendation of the candidate's advisor.

All candidates for the M.A. and Ph.D. degrees in mathematics are required to serve as teaching assistants as part of the work for their degrees.

■ IDND COURSE

017 FOUNDATIONS OF QUANTITATIVE THINKING

This course is designed to build conceptual knowledge about basic tools and techniques (including percents, percentiles, averages, graphs, elementary probability, simple geometry and algebraic notation). The emphasis is on knowing when to use an appropriate tool rather than solely on techniques. Students will write reports addressing concrete questions, including figuring out which data is involved, deciding how to get relevant output from the computer, drawing conclusions and supporting those conclusions using data and graphs. IDND 017 is required for new students whose Math Placement test results indicate they would benefit from it. It is strongly recommended for students who would like to strengthen their quantitative skills prior to enrolling in an FA, SP, or social science research methods/statistics course. Mr. Kennison, Ms. Sternberg, staff/offered every semester

■ MATHEMATICS COURSES

015 ELEMENTS OF MATHEMATICS/WORKSHOP

A noncredit course for students who need to improve basic understanding of mathematics before continuing. Students apply basic number concepts, elementary set theory, geometry, and probability to realistic problems and data sets. Mr. Kennison/Offered every semester

018 PROBLEM SOLVING WITH ALGEBRA/WORKSHOP

Centered on solving numerical problems using variables and equations, the course teaches the skills needed to work with numbers, variable expressions, equations, and graphs. Assignments from the text give students practice in the skills of algebra; class-time is spent focusing on the understanding and application of the concepts involved. Students solve problems independently after gaining experience by working on other problems together in class. One course credit. Mr. Kennison/ Offered every semester

104 ELEMENTARY NUMBER THEORY/LECTURE

An introduction to number theory, this course also aims to train students to understand mathematical reasoning and learn to write proofs. Topics covered include the unique factorization of integers as products of primes, the Euclidean algorithm, Diophantine equations, congruences, Fermat's theorem, and Euler's theorem (and some applications—e.g., calendar problems, magic squares, cryptology). Prerequisite: appropriate score on the mathematics placement test. Mr. Morris, Ms. Vaskas/ Offered every other year

105 HISTORY OF MATHEMATICS/ LECTURE, DISCUSSION

Explores major themes—calculation, number, geometry, algebra, infinity—and their historical development in various civilizations, ranging from the antiquity of Babylonia and Egypt through classical Greece, the Middle and Far East, and on to modern Europe. Analyzes the tension between applications of mathematics and the increasing tendency toward formalism. Presentations and discussions predominate in class.This course satisfies the historical perspective. Mr. Joyce/Offered every other year

110, 111, AND 112 FUNCTIONS AND CALCULUS I, II, III/ LECTURE, DISCUSSION

These courses are designed for the nonmajor, or for the less well-prepared student. Development of the function concept including logarithms and exponential functions, differential and integral calculus, maximization problems, related rates, graphing, and applications to social science. In Math 110, 111, trigonometric functions and theory are not covered in depth (so 110 and 111 are not recommended for majors in physics, chemistry, or mathematics, unless followed up by Math 112, which reviews trigonometry and covers theory, trigonometric calculus, and sequences and series). Students may not receive credit for both Math 110 and Math 120, or for both Math 111 and Math 121. These courses fulfill the formal analysis requirement. Prerequisite: Math 18 or a suitable score on the mathematics placement test. Mr. Kennison, Mr. Morris/Offered every year

114 DISCRETE MATHEMATICS/ LECTURE

This course studies mathematical structures that naturally arise in computer science. Topics include elementary logic and set theory, equivalence relations, functions, counting arguments, asymptotic complexity, inductively defined sets, recursion, graphs and trees, Boolean algebra and combinatorial circuits, finite state automata, and diagonalization and countability arguments. Proofs and problem solving are emphasized. Prerequisite: Math 018 or a suitable score on the mathematics placement test. Mr. Chou, Mr. Morris/Offered every year

115 INTRODUCTION TO LOGIC/LECTURE, DISCUSSION

The propositional calculus and the first-order predicate calculus, which consist of a symbolic language and a method of proving statements made in that language, are constructed and discussed. This course fulfills the formal analysis requirement. Mr. Joyce/Offered every other year

120 AND 121 CALCULUS I AND II/ LECTURE, DISCUSSION

Topics in Part I include functions, sequences and limits, continuity, differentiation of algebraic and trigonometric functions, mean value theorem, L'Hôpital's rule, and various applications. Topics in Part II include motivation for, and definition of, Riemann sums and integrals; techniques and application of integration; improper integrals; transcendental functions (logarithms, exponential functions, and inverse trigonometric functions); series and Taylor series. In this course, rigorous statements and intuitive notions are distinguished carefully. Calculus is essential for majors in biology, chemistry, computer science, mathematics, physics, and ENV (environmental science and policy). Math 120 and 121 fulfill the formal analysis requirement. Prerequisite: appropriate score on the mathematics placement test. Mr. Joyce, Mr. Kennison, Ms. Vaskas/Offered every year

124 AND 125 HONORS CALCULUS I AND II/LECTURE

This course is for mathematics majors and others who are interested in a deeper and more rigorous study of the topics considered in Math 120 and Math 121 and is strongly recommended for all mathematics majors and for students who have had previous experience with calculus. This course fulfills the Formal Analysis requirement. Prerequisites: An appropriate score on the mathematics placement test. Mr. Joyce, Mr. Morris, Mr. Rudolph/Offered every year

128 GEOMETRY/LECTURE

This course begins with a discussion of Euclidean geometry and quickly proceeds to modern related topics. Such topics may include Hilbert's axioms of geometry, the parallel postulate, hyperbolic (Lobachevskian) geometry, elliptic geometry, projective geometry, models of such geometries and philosophical implications of their existence, finite geometries, Klein's Erlanger Programme, and automorphism groups of geometries. One of the aims of this course is to show the beauty of the deductive approach in mathematics. Prerequisites: high school geometry, and either a semester of college mathematics or permission of the instructor. Mr. Joyce, Mr. Rudolph/ Offered every other year

130 LINEAR ALGEBRA/ LECTURE, DISCUSSION

This course is a prerequisite for Multivariate Calculus, and is a requirement for all mathematics majors. Topics include systems of linear transformations, minimum and characteristic polynomials, eigenvectors and eigenvalues, and determinants and bilinear forms. Corequisite: Math 121 or 125. Mr. Rudolph, Ms. Sternberg/Offered every fall

131 MULTIVARIATE CALCULUS/ LECTURE, DISCUSSION

Differential and integral calculus in several variables. Line and surface integration, Stokes' theorem. Prerequisites: Math 121 or 125, and Math 130. Mr. Rudolph, Ms. Sternberg/ Offered every spring

147 PROBABILITY THEORY AND ITS APPLICATIONS/LECTURE

The aim is to familiarize students with the probabilistic way of thinking, modelling, and problem solving, which underlie many disciplines in the social sciences and physical sciences, and in computer science. Different models of random phenomena are discussed. The course includes various probability distributions, Markov Chains, and stochastic processes. Rather than focusing on methods and formulae, this course emphasizes intuition and basic ideas. Applications are made to statistical estimation, queuing theory, probabilistic analysis of computer performance and algorithms. Prerequisite: Math 121 or Math 125. Mr. Chou, Mr. Kennison/Offered periodically

164 MATHEMATICAL MODELS/LECTURE

Mathematics is widely used (and misused) to model phenomena of all sorts. Mathematical models can be descriptive or predictive, deterministic or nondeterministic, dynamic or static, stable or chaotic. Students in this course construct models and critique each other's constructions as well as examples from the literature. Special attention is paid to issues of measurement, robustness, and sensitive dependence on initial conditions. Prerequisites: one year of calculus, or one year of programming plus one semester of calculus. Mr. Joyce, Mr. Kennison, Mr. Rudolph/Offered periodically

172 INTRODUCTION TO MODERN ANALYSIS/LECTURE

This course introduces analytic concepts that provide a language and unifying framework for theories encountered in different areas of mathematics. Students learn how to understand, formulate, and prove mathematical statements. Ideas first encountered in calculus are extended and studied using topological methods. Topics include convergence, metric and normed spaces, compactness, completeness, and Lebesgue integrals. Students who completed Math 125 (or who did well in

Math 121) are encouraged to take Math 172 in the sophomore year. All math majors must take Math 172 by the junior year at the latest. Corequisite: Math 130. Mr. Chou, Ms. Sternberg/Offered every year

181 MATHEMATICAL THEORY OF COMPUTATION

Refer to course description under Computer Science 270. Mr. Chou, Mr. Green/Offered every other year

201 PROSEMINAR IN MATHEMATICS/SEMINAR

The presentation of topics in mathematics by and for senior undergraduates. These presentations acquaint students with diverse subjects, introduce them to researching known topics, and give them practice in presenting material in front of their peers. Faculty members present surveys of their research areas. Possible topics include: category theory, knot theory, automorphic forms, topos theory, low-dimensional topology, class field theory, group representation theory, and dynamical systems. This is a capstone course in mathematics. Staff/Offered periodically

212 NUMERICAL ANALYSIS/LECTURE

Addresses the needs of students in mathematics and the sciences who are planning to do scientific computing. The goal of the course is to teach students how to set up reasonable computational algorithms and then to use the algorithms to work on actual projects. Topics covered include approximation theory, error analysis, numerical differentiation and integration, and solution of ordinary differential equations and linear systems. Prerequisites: Math 130 and Math 172. Mr. Chou, Ms. Sternberg/Offered every other year

214 MODERN ANALYSIS/LECTURE

Ideas introduced in Math 172 are developed further and applied to various scientific models. Topics include Hilbert spaces, Lp spaces, Fourier series, Weierstrass approximation theorems, and linear operators. Prerequisites: Math 130 and Math 172. Mr. Chou, Ms. Sternberg/Offered every other year.

216 FUNCTIONS OF A COMPLEX VARIABLE/LECTURE

Designed for undergraduate science majors as well as mathematics majors, this course includes Cauchy's theorem, power series, Laurent series, the residue theorem, harmonic functions, and physical applications, such as problems in two-dimensional flow. An introduction to Riemann surfaces if time permits. Prerequisite: Math 131 and Math 172. Mr. Rudolph/Offered every other year

217 AND 218 MATHEMATICAL STATISTICS I AND II/LECTURE

Designed to introduce students to the theory and applications of probability and statistics. Techniques used to solve problems are stressed along with the associated mathematical theory. Among the topics covered are combinatorial methods, postulates of probability, stochastic processes, probability densities, mathematical expectation, sampling distributions, estimation, hypothesis testing, regression, and correlation. The syllabus for this course includes most of the material recommended for those preparing for the second (F.S.A.) actuarial examination. Prerequisite: Math 131. Ms. Vaskas/Offered periodically

225 MODERN ALGEBRA I/LECTURE

The concepts of abstract algebra are introduced through concrete problems from number theory. In the nineteenth century, Kummer realized that the unique factorization of integers into primes breaks down in certain rings of algebraic integers. To get around this difficulty, he invented "ideal numbers," which led to the modern theory of rings and ideals. This course discusses unique factorization and ideal theory in rings, with emphasis on Euclidean domains. Other algebraic structures, such as groups and fields, also are introduced. This course is required for all math majors. Prerequisite: Linear Algebra, Math 130. Mr. Morris/Offered every year

226 MODERN ALGEBRA II/LECTURE

Early in the nineteenth century, Abel showed that there is no general algebraic formula for the solution of an equation of degree 5 or more. In order to determine whether or not a given polynomial is solvable, Galois developed group theory. Today, group theory is indispensable in almost every branch of mathematics, as well as parts of physics and chemistry. The main focus in this course is group theory and Galois theory. Other possible topics include canonical forms of matrices and modules. Prerequisite: Math 225. Mr. Morris/Offered every other year

228 TOPOLOGY/LECTURE

Homology theory is the proper context for Stokes' theorem from Math 131. In this course, we continue the study (begun in Math 131 and Math 172) of the topological properties of subsets of Euclidean space, by developing algebraic tools such as homology and fundamental groups. Further topics may include fixed-point theory, the Jordan curve theorem, and knot theory—as time permits. Prerequisites: Math 131 and Math 172. Mr. Morris, Mr. Rudolph/Offered every other year

244 DIFFERENTIAL EQUATIONS/LECTURE

Most of the ordinary differential equations that occur in mathematical models of physical, chemical, and biological phenomena cannot be solved analytically. Numerical integrations do not lead to a desired result without qualitative analysis of the behavior of the equation's solutions. The goal of this course is to study the flow of scalar and planar ordinary differential equations. Stability and bifurcation are discussed. Prerequisite: Math 130 and Math 172. Ms. Sternberg/Offered every other year

■ GRADUATE COURSES IN MATHEMATICS

The following courses are all offered periodically, on an independent basis. For further information, please consult the department.

300 Set Theory
316 Functions of a Complex Variable
318 Functions of a Real Variable
321 Algebraic Topology
325 Advanced Modern Algebra
326 Selected Topics in Complex Analysis
327 Functional Analysis
330 Master's Thesis
335 Selected Topics in Algebra
341 Differential Equations
358 Category Theory
376 Representation Theory of Finite Groups
381 Seminar in Complex Variables
382 Seminar in Abstract Analysis

■ COURSES IN COMPUTER SCIENCE

Courses in computer science are listed separately in this catalog under the heading Computer Science

Music

See Department of Visual and Performing Arts

Philosophy

DEPARTMENT FACULTY

Patrick Derr, Ph.D., chair: philosophy of science, biomedical ethics, history of modern European philosophy, ethical issues in hazards management

Judith DeCew, Ph.D.: philosophy of law, social and political philosophy, ethics, logic

Gary Overvold, Ph.D.: contemporary continental philosophy, interdisciplinary studies, epistemology, cultural history

Michael Pakaluk, Ph.D.: ancient philosophy, analytic philosophy, Hume, philosophy of psychology, philosophy of love and friendship, logic

Christina Sommers, Ph.D.: history of ethics, feminist philosophy, contemporary moral theory, philosophy of literature

Walter Wright, Ph.D.: nineteenth-century philosophy, ethics, philosophy of religion, metaphysics, German idealism

ADJUNCT FACULTY

Bernard Kaplan, Ph.D., Professor of Psychology: philosophy of psychology

Edward Ottensmeyer, Ph.D., Associate Professor of Management: business ethics

AFFILIATE FACULTY

Barbara Carlson, C.Phil.: logic, rhetoric, critical thinking

Sydney Thomas, Ph.D.: epistemology, aesthetics, feminist philosophy, history of American philosophy

UNDERGRADUATE PROGRAM

The Philosophy Department offers an undergraduate major program in philosophy, a concentration in ethics and public policy, a minor in philosophy, and a variety of elective courses which non-majors may take to broaden their education and fulfill Program of Liberal Studies requirements.

THE PHILOSOPHY MAJOR

The requirements for a major in philosophy are designed to ensure exposure to the major systematic fields in philosophy, to ensure familiarity with advanced analytic and logical methods, to acquaint the student with the history of the discipline, and to provide close faculty-student contacts through advanced seminars and individual research projects. The major program includes two tracks, a traditional liberal arts track, recommended for preprofessional students and for students completing a double major in philosophy and another discipline, and an intensive honors track, recommended for honors students and for students considering graduate study for the Ph.D. in philosophy.

Major requirements in the Traditional Liberal Arts Track

1. Required courses in philosophy

    One course in formal logic (110 or 160)

    Two courses in the history of philosophy (141, 143, or 145)

    One advanced course in the area of metaphysics

One advanced course in the area of epistemology

One advanced course in the area of ethics

One advanced elective, chosen to complement the student's second major or intended professional field

A designated Capstone Seminar

2. Required courses outside philosophy

Either: (i) a completed double major; or (ii) a completed concentration (for example, Environmental Science and Policy, Ethics & Public Policy, Women's Studies, Classics, Ancient Civilizations, Judaic Studies, or Communications); or (iii) a completed minor in any other program or department.

Major requirements in the Intensive Honors Track

1. Required courses in philosophy

One course in formal logic (110 or 160)

Three courses in the history of philosophy, (141, 143 and either 145 or 154)

One advanced metaphysics course (234 or 235)

One advanced epistemology course (240 or 241)

One advanced ethics course (220 or 228)

One advanced seminar devoted to the study of a single major philosopher (for example: 250, 251, 256, 257)

One advanced seminar devoted to the study of a major philosophical tradition (for example: 210, 211, 258, 265, 275)

Teaching Assistantship (203) or Research Apprenticeship (296)

Directed Research (296; 299, section 1; or 299, section 2)

Thesis (299, section 8)

2. Required courses outside philosophy

Reading competence in a foreign language (usually Greek, Latin, German or French) as demonstrated by earned grades of B- or better in a full-year college language course or by other suitable evidence.

■ THE PHILOSOPHY MINOR

Students pursuing a minor in philosophy at Clark can choose one of two tracks. Each track requires six courses in philosophy, and each is designed to develop students' intellectual skills and to familiarize them with the fundamental methods of philosophical inquiry. Each track begins with a foundation in logic and practical ethics.

The traditional "Great Issues" minor track emphasizes a deep grounding in the history of philosophy. This track engages the student in the fundamental philosophical questions with which human beings have been perennially concerned: for example, Does God exist? How ought I to live? What is knowledge? Do human beings have free will? Can political authority be legitimated? Is there life after death?

The optional "Enriched Major" minor track emphasizes advanced work in courses related to students' majors. This track engages students in the fundamental philosophical questions which their own major fields raise but do not answer: for example, What is a mind? What is a person? What is the nature of a profession? What is science? What is justice?

Requirements for the "Great Issues" Minor Track

One course in logic (103 or 110)

One course in practical ethics (105, 130, 132, 133, or 139)

Three courses in the history of philosophy (141, 142, 143, 145, 148, or 215)

One advanced elective course (200+)

The optional "Enriched Major" Track

One course in logic (103 or 110)

One course in practical ethics (105, 130, 132, 133, or 139)

One course in the history of philosophy (141, 142, 143, 145, 148, or 215)

One elective course, chosen at any level

Two advanced courses (200+) chosen to complement the student's major or pre-professional program.

■ DIRECTED READINGS, INDIVIDUAL RESEARCH, TUTORIALS

For students who wish to undertake significant independent research, the department offers individual Directed Research (PHIL 2992) and Directed Readings (PHIL 2991) courses, and Advanced Topics in Philosophy courses (PHIL 297). Students interested in these possibilities should consult with individual members of the philosophy faculty.

■ INTERNSHIPS, RESEARCH APPRENTICESHIPS

Students are encouraged to apply for a research apprenticeship with an individual philosophy professor. Research apprentices work closely with their mentor on the mentor's scholarly research, sometimes co-authoring a published article. Some recent topics have been: ethical issues in reproductive technology; privacy in law and ethics; and statistical stylometry and ancient philosophy. Philosophy faculty also sponsor off-campus undergraduate internship experiences, often with medical or legal professionals with whom they have a consulting or research relationship. Students interested in these opportunities may inquire at the department or through the internship office.

■ SENIOR THESIS

All undergraduate majors are encouraged to complete a senior thesis (PHIL 2998); majors in the intensive track are required to do so. Thesis students engage in advanced individual research on a selected philosophical problem, guided by a faculty advisor and a thesis committee composed of three faculty members. See course description (2998) for more information. Completion of a thesis is a requirement for departmental honors.

■ HONORS PROGRAM

Honors, high honors, or highest honors in philosophy may be conferred at graduation upon majors who, in addition to having compiled a suitable record in the intensive major track, successfully defend their senior thesis in an oral presentation to their thesis committee. At the department's discretion, honors or high honors may occasionally be conferred upon majors who, in addition to having compiled a superior record in the traditional major track, complete and defend a senior thesis.

DEPARTMENT PRIZES, AWARDS, AND HONOR SOCIETIES

Each year, the department inducts its best junior and senior philosophy majors into Phi Sigma Tau, the national philosophical honor society. At the Spring honors convocation, the department awards one or more prizes to exemplary graduating seniors. At the Fall convocation, the department confers a prize for the best work in logic by a first- or second-year student.

INSTITUTES AND LIBRARIES

The Clark University Department of Philosophy houses the New England Chapter of the Society for Philosophy and Public Affairs, a national organization that works to promote the application of philosophical methods and insights to the consideration of such public issues as medical ethics, criminal justice, civil disobedience, pornography and censorship, economic justice, and affirmative action. The society sponsors colloquia, symposia, and conferences on public policy issues. Inquiries concerning its activities may be directed to the department.

DEPARTMENTAL PUBLICATIONS

The international philosophical journal, Idealistic Studies, is edited by Walter Wright. Founded by Robert N. Beck, Idealistic Studies is a leading interdisciplinary journal focusing on issues of contemporary philosophy of science and idealism.

THE PHILOSOPHY CLUB

Students interested in philosophy and philosophical dialogue, whether majors in the department or not, are invited to join the Philosophy Club. The club meets regularly with invited speakers and faculty to discuss topics chosen by its members. The club also organizes field trips to philosophical meetings at other New England institutions. Information on the club is available from the department.

COURSE NUMBERS AND LEVELS

100-119 Introductory courses for all students; no prerequisites.

120-129 Special first-year seminars; for first-year students only.

130-139 Courses in applied ethics for all students; no prerequisites.

140-149 Survey courses in the history of philosophy (at least two are required for the major); usually no prerequisites.

150-199 Intermediate courses in various areas of philosophy; usually one prerequisite.

200-209 Surseminars offered on an individual basis to students working as teaching assistants, editorial assistants, etc.; usually several prerequisites.

210-214 Interdisciplinary seminars; two or more prerequisites.

215-219 Advanced courses in systematic and historical areas of philosophy; two prerequisites.

220-229 Advanced courses in systematic ethics; two prerequisites.

230-239 Advanced courses in systematic meta physics; two prerequisites.

240-249 Advanced courses in systematic epistemology; two prerequisites.

250-289 Seminars on individual philosophers or philosophical issues; two or more prerequisites.

290-299 Advanced topics; individual research; senior thesis; and other small, intensive courses in philosophy; four to six prerequisites.

■ INTRODUCTORY COURSES

102 INTRODUCTION TO PHILOSOPHY/LECTURE, DISCUSSION

Introductory study of typical problems drawn from philosophy's main branches. Topics often include God's existence, the nature of morality, skepticism, freedom vs. determinism, immortality, and political theory. Readings are taken from both classic and contemporary sources. Mr. Overvold, Mr. Derr, Mr. Pakaluk/ Offered every semester

103 ANALYTIC REASONING/ LECTURE, DISCUSSION

Major emphasis is given to the analysis of argumentative essays (drawn from newspapers, philosophical works, legal journals, and popular magazines) on such topics as affirmative action, the problem of evil, the nature of law, scientific method, etc. The class analyzes the material with an eye to its cogency and persuasiveness, identifying its premises and conclusions, assumptions and implications. The course helps students to read, write, and think in a more analytical and critical manner. Ms. Carlson/Offered every semester

104 ANALYTIC WRITING/ LECTURE, DISCUSSION

While clear, critical thinking is acknowledged to be a prerequisite for effective writing, this course operates on the assumption that the writing process itself helps one to organize and clarify one's thoughts. We focus on learning to clearly express a position on a controversial issue and to persuade one's audience of the truth of that position. The process of mastering these skills will begin with the reading, analysis, and critical evaluation of arguments, in preparation for the main objective of the course: the writing of effective argumentative essays. Ms. Carlson/Offered every semester

105 PERSONAL VALUES/ LECTURE, DISCUSSION

A philosophical study of some fundamental human concerns: What is the nature of a good life? Does the moral life possess intrinsic value? Are moral values inescapably relative to cultures? On what basis can we decide if an action is morally right or wrong? Does character matter? What moral issues are at stake in truthfulness, self-respect, love, sexual integrity? Students learn some important moral theories and methods used to reason philosphically about moral questions. Ms. Thomas, Ms. DeCew, Ms. Sommers/Offered every semester

107 AIDS: ETHICS AND PUBLIC POLICY/FIRST-YEAR SEMINAR

The HIV epidemic challenges not only our scientific and medical establishments, but our concepts of social justice, personal responsibility, professional ethics, and international solidarity. This seminar examines a number of these issues in their multidisciplinary context. (See description under PHIL 273.) Special attention is given to the cultivation of university-level research, writing, and computer skills. Intensive tutorial assistance is provided by a senior peer advisor and teaching assistant. Open only to first-year students. Mr. Derr/Offered periodically

110 INTRODUCTION TO LOGIC/LECTURE, DISCUSSION

An introduction to logic as both a practical skill and a branch of philosophy. The student is introduced to the principles, methods, and philosophical foundations of logical reasoning, with special attention to symbolic technique. Mr. Pakaluk, Ms. DeCew/Offered every semester

■ INTERMEDIATE COURSES

130 MEDICAL ETHICS/ LECTURE, DISCUSSION

An investigation of contemporary issues in medical ethics: informed consent, definitions of death, treatment termination and euthanasia, abortion, confidentiality and truth telling, genetic screening and counseling, research on human subjects, resource allocation, reproductive technologies, conflicts of interest, and national health policy. Not open to first-year students. Mr. Derr/Offered every semester

132 SOCIAL AND POLITICAL ETHICS/LECTURE, DISCUSSION

Topics in social and political theory, such as equality, liberty, and justifications for political authority, as well as issues such as: What is affirmative action, and can it be morally justified? Should governments censor pornography? Is capital punishment acceptable? Can war be justified? Should morality be legislated? Should anything else be legislated? Ms. DeCew, Ms. Thomas/Offered every semester

133 BUSINESS ETHICS/ LECTURE, DISCUSSION

Investigates moral problems in and about the world of business: Do corporations have moral responsibilities, or is their only social responsibility to increase profits? Is capitalism morally justifiable, or is some other politico-economic system morally preferable? The course also discusses ethical issues in advertising, affirmative action, and business's responsibilities toward the environment. Mr. Ottensmeyer/Offered every year

141 HISTORY OF ANCIENT PHILOSOPHY/LECTURE, DISCUSSION

Examines the origins of Western thought in early Greek philosophy. Readings include the fragments of the Pre-Socratic philosophers; the Apology, Phaedo, Gorgias, and Republic of Plato; and selections from the Organon, De Anima, Physics, Metaphysics, and Ethics of Aristotle. Mr. Pakaluk/Offered every year

142 HISTORY OF MEDIEVAL PHILOSOPHY/LECTURE, DISCUSSION

A survey of medieval philosophy with special attention to some of the philosophical texts that were pivotal to the later development of Western philosophy and culture. These include Augustine's Confessions, Boethius' Consolation of Philosophy, Aquinas' Summa Theologica, and Maimonides' Guide for the Perplexed. Mr. Pakaluk/Offered periodically

143 HISTORY OF MODERN EUROPEAN PHILOSOPHY/ LECTURE, DISCUSSION

The two great movements in modern Western thought—Continental rationalism and British empiricism—are examined from their common origin in Descartes, through their later articulations by Hobbes, Locke, Berkeley, Leibniz, and Hume, to their eventual transformation by Immanuel Kant. Particular emphasis is given to the interaction of philosophy and science and to the powerful influence exerted by the modern European thinkers upon contemporary thought. Mr. Derr/Offered every year

145 HISTORY OF CONTEMPORARY PHILOSOPHY/ LECTURE, DISCUSSION

A survey of the major trends in recent Anglo-American and Continental philosophy: pragmatism, logical positivism, ordinary language philosophy, hermeneutics, critical theory, and phenomenology. Each alternative is considered as a coherent perspective on experience, with special attention given to its style and methodology. Prerequisite: Philosophy 143 or permission of the instructor. Mr. Overvold/ Offered every year

148 HISTORY OF AMERICAN PHILOSOPHY/LECTURE, DISCUSSION

Pragmatism was the first indigenous American philosophical movement and continues to influence philosophical thought in America today. This course concentrates on the founders of pragmatism—Pierce, James and Dewey—and explores their influence on later pragmatists—Lewis, Quine and Rorty. Prerequisite: one course in philosophy. Ms. Thomas/ Offered periodically

150 PHILOSOPHY OF RELIGION/ LECTURE, DISCUSSION

Considers the nature of religion as revealed by the examination of religious experience. Emphasis is given to the effect of contemporary knowledge on our understanding of religion. Prerequisite: one course in philosophy. Mr. Wright/Offered every year

154 RECENT EUROPEAN PHILOSOPHY/LECTURE, DISCUSSION

Introduces four contemporary European philosophical movements: hermeneutics, deconstructionism, critical theory, and structuralism. Prerequisite: one course in philosophy or permission of instructor. Mr. Overvold/Offered every other year

160 INTERMEDIATE LOGIC/ LECTURE, DISCUSSION

Emphasis is on formal principles of deductive rigor with some consideration of the philosophical implications of logic. Topics include advanced quantificational logic, elementary modal logic, selected metatheorems, and applications of logic to philosophical argument. Prerequisite: PHIL 110. Mr. Pakaluk, Ms. DeCew, Mr. Wright/Offered every year

167 MYTH, RELIGION, AND ART/LECTURE, DISCUSSION

Among living beings, only humans appear to think symbolically. Our myths, religious beliefs and art works symbolize our deepest fears and our most profound aspirations. This course explores the function of symbols in religious, mythic and artistic expression, and looks for levels and meaning and insight common to all three. The views of Langer and Campbell receive special attention. Ms. Thomas/Offered every other year

169 AESTHETICS/LECTURE, DISCUSSION

Why did Plato condemn poets and their work? Can art be neatly defined? Is art "imitation," "emotion," "relations of forms" or is it indefinable? Are there standards of beauty? Among the theories we consider are those of Aristotle, Tolstoy, Collingwood, Danto, Dickie, and Kant. Prerequisite: one course in philosophy. Ms. Thomas/Offered every other year

■ ADVANCED COURSES

203 SURSEMINAR: TEACHING PHILOSOPHY/SEMINAR

Registration is limited to students working as discussion group leaders in Philosophy 102, 105, 107, 110, 130 or 132. Mr. Derr, Ms. DeCew, Mr. Pakaluk, Ms. Thomas, Ms. Sommers/Offered every semester

210 MODERNISM IN PHILOSOPHY, LITERATURE AND THE ARTS/LECTURE, DISCUSSION

Between 1890 and 1930, the forms of inquiry and artistic expression in Western culture went through radical, foundational transformation. Using representative texts from the humanities and the arts, this course examines the Modernist Transformation in its historical, cultural, and thematic context, using a multidisciplinary perspective to integrate topics in related areas of inquiry and expression. Prerequisite: two courses in philosophy plus courses in related areas. Mr. Overvold/Offered periodically

211 EXISTENTIALISM IN PHILOSOPHY, LITERATURE AND ART/LECTURE,DISCUSSION

This course explores central existential themes—such as the meaning of life, freedom and responsibility, the role of the irrational in human thought, action and expression, and the "death of God"—in their historical, cultural, and thematic context, using a multidisciplinary perspective to integrate topics in related areas of inquiry and expression. Existentialism is treated as both as a postwar cultural event and a view of life's meaning and possibilities. Prerequisite: two courses in philosophy plus courses in related areas. Mr. Overvold/Offered periodically

212 PHILOSOPHY AND THE HUMAN SCIENCES/LECTURE, DISCUSSION

Using texts from both the humanities and the social sciences, this course examines central philosophical themes in the human sciences—rationality; action, choice and character; human nature; the other, self and society; explanation and human action—in their historical, cultural, and thematic context, using a multidisciplinary perspective to integrate topics in related areas of inquiry and expression. The course also considers the status and methods of the "human sciences" and philosophy's place among and relationship to them. Prerequisite: two courses in philosophy plus courses in related areas. Mr. Overvold/Offered periodically

213 POLITICS AND HUMAN NATURE

Some philosophers have believed that human beings can be changed in radical ways to render them fit citizens of a more perfect society. What are the consequences of such attempts at utopian social engineering? We read from Plato, Marx, Stalin, Franz Fanon, and Mao Tse-tung. We also consider critics of utopian revolutionary theory—Burke, Popper, and Milosz and biographical works by Orwell, Koestler, Kundera and Cheng that concern the fate of the individual in a totalitarian state. Prerequisite: two courses in philosophy. Ms. Sommers/Offered every other year

215 KANT AND THE NINETEENTH CENTURY/LECTURE, DISCUSSION

Examines the work of Kant and selected later philosophers (Fichte, Hegel, Schopenhauer, Nietzsche, Marx, Engels, and Comte) with emphasis on their influence on contemporary thought. Prerequisite: two courses in philosophy, including Philosophy 143. Mr. Wright/Offered every other year

219 FEMINIST THEORY/ LECTURE, DISCUSSION

An investigation of selected topics in recent feminist philosophical literature. Topics and authors vary each year. Attention is given to the many different perspectives included in contemporary feminist theory. Prerequisite: two courses in philosophy or permission of the instructor. Ms. Sommers/Offered every other year

220 HISTORY OF ETHICS/ LECTURE, DISCUSSION

Examines the principal ethical theories from the history of Western philosophy, including such philosophers as Plato, Aristotle, Epicurus, Aquinas, Hobbes, Hume, Kant, Ross, Rawls, and Mill. Topics include: What is "the Good"? How can it be realized in society and in one's personal life? Are there other standards of right conduct? Are moral judgments objective? Why should we be moral? Prerequisite: two courses in philosophy. Ms. DeCew, Ms. Sommers/Offered every year

221 SOCIAL AND POLITICAL PHILOSOPHY/LECTURE, DISCUSSION

Surveys the leading philosophical accounts of social and political institutions, including social contract theory, anarchism, socialism, democratic capitalism, and communism. Property, civil and natural rights, freedom and obligations, and the legitimation of political authority are treated in detail. Readings include both classical and contemporary sources. Prerequisite: two courses in philosophy. Ms. DeCew/Offered every other year

228 CONTEMPORARY MORAL THEORY/LECTURE, DISCUSSION

Surveys recent work in moral theory (including both metaethical and normative issues) by leading Anglo-American philosophers. Prerequisite: two courses in philosophy. Ms. DeCew, Mr. Pakaluk, Ms. Sommers/Offered every other year

234 METAPHYSICS/ LECTURE, DISCUSSION

An advanced survey of fundamental problems in metaphysics: universals, substance, the mind/body relation, category theory, identity and individuation, free will, and the nature of space and time. Prerequisite: two courses in philosophy. Ms. DeCew, Mr. Pakaluk, Mr. Wright/Offered every year

235 CONCEPTS OF SELF/LECTURE, DISCUSSION

Considers the various philosophical concepts of the "self" that have been developed by classic and contemporary philosophers. Typical thinkers whose views may be covered include Aristotle, Plato, Aquinas, Descartes, Kant, Heidegger, Sartre, Kierkegaard, Strawson, Levinas, and Stevenson. Prerequisite: two courses in philosophy. Mr. Wright/Offered every year

240 EPISTEMOLOGY/ LECTURE, DISCUSSION

The study of the nature and sources of knowledge, with special attention to the interrelationships among belief, knowledge, evidence, proof, truth, and the problem of skepticism. Prerequisite: two courses in philosophy. Mr. Overvold, Ms. Thomas/Offered every year

241 PHILOSOPHY OF SCIENCE/ LECTURE, DISCUSSION

Examines such questions as: What is a scientific explanation? Can induction be justified? What could justify the claim that one theory is better than another? Are there such things as objective "facts"? Do scientific theories disclose the ultimate constituents of the universe? What is the difference between science and pseudo-science? Special attention is given to the views of Hempel, Popper, Kuhn, Lakatos, Laudan, Feyerabend, and Hesse. Prerequisite: four courses in natural sciences or two courses in philosophy. Mr. Derr/Offered every other year

242 PHILOSOPHY OF LANGUAGE/ LECTURE, DISCUSSION

An analysis of the concepts of reference, meaning, analyticity, intentionality, intensionality, rules, and the relation of language to thought. Particular attention is given to speech act theory (Austin, Grice, Strawson, Searle) and to the implications of language theory for the social sciences (Ricoeur, Louch). Prerequisite: two courses in philosophy. Staff/Offered periodically

250 PLATO/SEMINAR

A detailed and advanced study of the philosophical thought of Plato. The seminar involves careful reading and discussion of one of the major dialogues, such as the Parmenides, Sophist, or Theaetetus. Prerequisite: Philosophy 141. Mr. Pakaluk/Offered every other year

251 ARISTOTLE/SEMINAR

A detailed and advanced study of the philosophical thought of Aristotle. The seminar involves careful reading and discussion of one of the major works, such as the De Anima, Physics, Metaphysics, and Nicomachean Ethics. Prerequisite: Philosophy 141. Mr. Pakaluk/Offered every other year

256 KANT/SEMINAR

Students are introduced to Kant's Critique of Pure Reason—regarded by many as the most important philosophical text of the last several hundred years. Prerequisite: two courses in philosophy, including 143. Mr. Wright/ Offered periodically

257 HEGEL/SEMINAR

Hegel's The Phenomenology of Mind and selections from his other works. Prerequisite: two courses in philosophy, including 143. Mr. Wright/Offered periodically

258 THE ORIGINS OF ANALYTIC PHILOSOPHY/SEMINAR

An examination of the development of analytic philosophy through an intensive study of its three founding figures: Gottlob Frege, Bertrand Russell, and Ludwig Wittgenstein. Readings include Frege's Foundations of Arithmetic, Russell's Mysticism and Logic, and Wittgenstein's Tractatus Logico-Philosophicus. Prerequisite: two courses in philosophy, including 110 or 160. Mr. Pakaluk/ Offered periodically

259 HEIDEGGER AND WITTGENSTEIN/SEMINAR

The seminar concentrates on two of the most influential texts of twentieth-century philosophy: Heidegger's Being and Time and Wittgenstein's Philosophical Investigations. Prerequisite: two courses in philosophy. Mr. Overvold/Offered periodically

260 KIERKEGAARD AND NIETZSCHE/SEMINAR

A study of Kierkegaard and Nietzsche as seminal figures in nineteenth-century intellectual life and as sources of later twentieth-century philosophical developments. Particular attention is given to their views of human existence and of truth. Prerequisite: two courses in philosophy. Mr. Overvold/Offered periodically

263 PHILOSOPHY OF MIND/SEMINAR

A critical examination of the "nature" or concept of mind. Related issues considered are: mind/body relationship, the identity theory of mind/brain, the thesis of dualism, and other themes that involve the philosophical examination of psychological phenomena. Prerequisite: two courses in philosophy. Mr. Overvold/ Offered every other year

265 IDEALISM/SEMINAR

Detailed and advanced study of the major idealistic philosophers including: an investigation of traditional arguments for idealism, the major metaphysical and epistemological theories held by idealists, and the relevance of idealism to the contemporary scene. Course topics and texts will vary from year to year. Mr. Wright/Offered every other year

270 PHILOSOPHY OF LAW/SEMINAR

Examines fundamental questions in philosophy of law, such as: Is law "natural," "God-given," or "an artificial contrivance of man"? What is the purpose of law? What is the nature of judicial reasoning, and is it subjective or governed by some set of principles? How do alternative theories of law explain rights, duties, liability, responsibility, and so forth? What is the relationship between liberty, privacy, and justice? Prerequisite: two courses in philosophy. Ms. DeCew/Offered every year

272 ADVANCED ISSUES IN MEDICAL ETHICS/SEMINAR

A rigorous investigation of two or three current controversies related to medicine, health policy, and ethics. Readings include original materials from the legal, medical, and philosophical literatures. Topics have included: surrogate motherhood, AIDS, xenogestation, and assisted suicide. Prerequisite: permission of the instructor. Mr. Derr/Offered periodically

273 AIDS: ETHICS AND PUBLIC POLICY/SEMINAR

The HIV epidemic challenges not only our scientific and medical establishments, but our shared conceptions of social justice, professional fidelity, and interpersonal solidarity. This multidiscplinary seminar examines moral and policy questions related to: the care and treatment of HIV infected patients; the duties of health care professionals; public health policies; HIV in the criminal justice system; the blood product industry; AIDS education; insurance and insurability; equal employment opportunity and occupational health; biomedical research policies and priorities; cultural and institutional concepts of sexuality and eroticism; and other issues. Usually team-taught with faculty from biology and management. Prerequisite: permission of instructor Mr. Derr/Offered periodically

275 PHENOMENOLOGY/SEMINAR

An intensive study of two representatives of contemporary phenomenology: Edmund Husserl and Maurice Merleau-Ponty. Some consideration is given to other major philosophers within the tradition and to the historical context of the phenomenological movement in general. Prerequisite: at least three courses in philosophy. Mr. Overvold/Offered periodically

276 NIETZSCHE, HEIDEGGER, AND EARLY TWENTIETH-CENTURY PHILOSOPHY/SEMINAR

This seminar concentrates on Continental philosophy, focusing on the two most influential philosophers of the time. Attention also will be given to the broader cultural context and to parallel changes in American and British philosophy during the early twentieth century. Prerequisite: at least three courses in philosophy. Mr. Overvold/Offered periodically

287 PHILOSOPHY OF THE SOCIAL SCIENCES/SEMINAR

A critical and intensive survey of the four alternative accounts of explanation, social reality, and social science put forward by the neopositivist empiricists, the phenomenologists, the neo-Wittgensteinians, and the Continental hermeneuticists and critical theorists. Prerequisite: at least four courses in philosophy or graduate status in a social science. Mr. Overvold/Offered periodically

299 SEC. 1 DIRECTED READINGS/ INDIVIDUAL PROJECTS

299 SEC. 2 DIRECTED RESEARCH/ INDIVIDUAL PROJECTS

See description and prerequisites under Major Requirements above.

299 SEC. 5 RESEARCH APPRENTICESHIP/INDIVIDUAL PROJECTS

A research apprentice participates in the current professional research of her or his faculty sponsor. Students accepted as apprentices need initiative, perseverance, and superior research and writing skills. Recent apprentices have worked on issues in medical ethics, ancient Greek philosophy, philosophy of law, and feminist theory. Prerequisite: at least four courses in philosophy, permission of the instructor, and approval of the department. Ms. DeCew, Mr. Derr, Mr. Overvold, Mr. Pakaluk, Ms. Sommers, Mr. Wright/Offered every semester

299 SEC. 7 ADVANCED TOPICS IN PHILOSOPHY/INDIVIDUAL PROJECTS

Individual tutorials and supervised research on philosophical topics selected by the student and faculty sponsor. Prerequisite: at least four courses in philosophy and permission of instructor. Recent topics have included Thomistic philosophy, medieval Jewish philosophy, feminist theory, modal logic, philosophy and the Holocaust, and Kant's Critique. Ms. DeCew, Mr. Derr, Mr. Overvold, Mr. Pakaluk, Ms. Sommers, Ms. Thomas, Mr. Wright/Offered every semester

299 SEC. 8 SENIOR THESIS/ INDIVIDUAL PROJECTS

The prerequisites, which should be completed by the end of the student's junior year, are: (1) at least six courses in philosophy; and (2) submission and approval of a thesis proposal. The thesis proposal must describe the nature and scope of the proposed project, provide a bibliography of the principal sources the student expects to use, include a schedule for submission of first and final drafts to the advisor and the committee, and be signed by the student's thesis advisor. Upon completion of the thesis, the department faculty schedules an oral defense for the student. Offered for one or two credits over one or two semesters. Ms. DeCew, Mr. Derr, Mr. Overvold, Mr. Pakaluk, Ms. Sommers, Ms. Thomas, Mr. Wright/Offered every semester

Physics

■ DEPARTMENT FACULTY

Charles Agosta, Ph.D., director of 3/2 engineering program: experimental condensed matter physics

S. Leslie Blatt, Ph.D.: experimental nuclear physics, physics education

John Davies, Ph.D.: theoretical plasma physics

Stanley Geschwind, Ph.D.: experimental condensed matter physics

Robert L. Goble, Ph.D.: technology assessment, atmospheric physics and turbulence

Harvey Gould, Ph.D.: theoretical condensed matter physics, computer simulation

Christoph Hohenemser, Ph.D.: technology assessment

Christopher P. Landee, Ph.D: experimental condensed matter physics, magneto-chemistry

■ ADJUNCT FACULTY

Daeg S. Brenner, Ph.D., Chemistry

Alan A. Jones, Ph.D., Chemistry

■ AFFILIATE FACULTY

George Phillies, Ph.D.

■ EMERITUS

Roy S. Andersen, Ph.D: history and philosophy of science

Roger P. Kohin, Ph.D.: experimental condensed matter physics

■ UNDERGRADUATE PROGRAM

Clark offers a major in physics, generally regarded as the most fundamental of the sciences and an important element of a liberal arts education. Introductory courses are designed both for students majoring in physics and for others who want a broad background in the fundamentals of physical principles, the observation of natural processes, the logic and nature of science, and the diverse applications of physics. Many courses are appropriate for undergraduates with little or no prior experience with physics or college-level mathematics. Courses of this type include:

(1) Scientific Perspective Courses. Physics 102, and Astronomy 001 and 002 are suitable for students with no background in college-level mathematics; these courses have no prerequisites, and satisfy the scientific perspective requirement of the Program of Liberal Studies. Physics 111, 112, 113, 114 and 115 also satisfy the scientific perspective requirement but are intended for science majors.

(2) Introductory Laboratory Courses. The department offers several undergraduate courses involving laboratory experience. Examples include Physics 111, 112, 113, 114, and 115. Physics 111 fulfills the physics laboratory requirement for premedical/predental students.

(3) Introductory Physics Courses. Prospective science majors are urged to begin to study physics during their first or second years since understanding the natural sciences requires a knowledge of the basic principles of physics. The department offers two sequences of introductory courses. Physics 110/111 forms a two-semester, noncalculus-based survey of physics appropriate for the majority of science majors; environmental science and policy majors; and premedical/predental students. Physics 110/112/113 forms a three-semester survey of physics recommended for physics, chemistry, and mathematics majors. The 110/112/113 sequence covers mechanics, electricity and magnetism, quantum physics, and relativity in more depth than the 110/111 sequence and thereby gives better preparation for advanced study. Physics 112 treats some of the top-

ics covered in Physics 111, but offers greater depth. Because Physics 112 is less comprehensive, it should be followed by Physics 113.

Students may contact course instructors or the physics undergraduate advisor further information about physics offerings.

■ THE MAJOR

A major program can be structured to meet the individual needs of students: graduate study in physics or engineering, or careers in management, environmental studies, government, law, medicine, and the teaching profession. During their first year, prospective physics majors are urged to enroll in Physics 110 and 112 and to consult the undergraduate physics advisor about their individual programs of study. The requirements for a major in physics are fourteen courses of a common core curriculum and four additional approved courses in physics or related areas. The core curriculum, taken by all physics majors, encompasses mechanics, electricity and magnetism, quantum and thermal physics, and four semester courses in calculus. The requirements for the major are flexible and, through consultation with the undergraduate physics advisor, may be modified to satisfy the particular needs and interests of each student. Examples of individual programs are:

General Physics – a program appropriate for students who wish to major in physics as part of liberal arts education, perhaps as preparation for a career in teaching or business.

Preprofessional Physics – a program of courses in physics, chemistry and mathematics to prepare students for graduate study in physics or research in industry.

Biological Physics – a program including chemistry and biology courses that can be used as preparation for entrance to medical or dental schools or for careers in the biomedical professions.

Materials Science – a program of advanced courses in physics and chemistry designed to prepare students for graduate study in the interdisciplinary area of materials science.

Computational Physics – a program of advanced courses in physics, computer science, and mathematics designed to prepare students for graduate study in the rapidly growing area of computational science.

Technology Assessment – a program of interdisciplinary courses to enable students to make physical, economic, and value assessments of technological systems.

A student interested in using physics as the basis for an engineering career should inquire about the 3-2 Engineering Program offering students a five-year option to combine a liberal arts (B.A.) degree from Clark and a B.S. in engineering from the College of Engineering and Applied Science at Columbia University.

Courses in the core curriculum include:

	UNITS
(1) Introductory Physics: Physics 110 and Physics 111 or 112 (112 is recommended)	2
(2) Intermediate-level Physics: Physics 113 and 114	2

(3) Calculus: Mathematics 120, 121, 130, and 131	4
(4) Laboratory-based courses: Physics 115 or 219	1
(5) Upper-level courses: Physics 123, 161, 162, and 174	4
(6) Senior project: Physics 231, or equivalent	1
	—
TOTAL IN CORE CURRICULUM	**14**
Additional approved electives	4
	—
TOTAL IN MAJOR PROGRAM	**18**

Students with strong backgrounds in physics and mathematics may replace required courses with appropriate advanced courses with the approval of the undergraduate physics advisor. Advanced placement credits may count toward major requirements. Advanced undergraduates may take graduate-level courses.

It is possible to complete all requirements for the major within three years, so that it is not essential to begin the study of physics in the first year. Majors are required to confer with the undergraduate advisor every semester prior to registration to plan courses for the following semester and to ensure that all requirements for the major are being satisfied.

Information about career opportunities after graduation as well as further information about courses and major requirements can be obtained from the undergraduate physics advisor and other physics faculty members.

■ THE CAPSTONE EXPERIENCE

An independent research project is the most appropriate capstone experience for physics majors. Students are encouraged to "do physics" at the earliest possible opportunity. Majors are required to take a capstone course of one semester of Physics 299 Sec. 5, Special Projects in Physics I, or an approved course of comparable scope. Near the end of the junior year (or earlier) a physics major should arrange a topic for his or her senior project in consultation with department faculty members. Work is conducted under the guidance of a faculty member, often with the assistance of graduate students. The faculty seeks to design projects that lead to publication in refereed physics journals. Majors with a special interest in research may continue their research by enrolling in additional semesters.

■ HONORS

Students can apply for departmental honors in recognition of meritorious academic standards and creativity in research. An honors candidate must maintain an overall B- average. All eligible majors are encouraged to participate in the honors program. Written applications for the honors program should be submitted to the undergraduate advisor by the end of the junior year.

Honors candidates are expected to conduct a research project under the guidance of a faculty member during the junior and/or senior years. A thesis describing the work must be submitted to the faculty no later than April 1 of the senior year and be defended orally in a special departmental convocation about two weeks later. Recommendation for honors in physics is made on the basis of the quality of the thesis and student performance in the defense. Students may gain credit for thesis research by registering for a Physics 299 Sec. 5 seminar.

GRADUATE PROGRAM

The department offers the master of arts and doctor of philosophy degrees in physics. Departmental research is concentrated in experimental and theoretical studies of condensed matter including magnetic and optical properties of solids, magnetic critical phenomena, high temperature superconductivity, and the dynamics of first-order phase transitions. Other research areas include theoretical plasma physics, interdisciplinary studies of risk assessment and energy technology, and nuclear physics.

The academic requirements of the graduate program are flexible, with emphasis on early student participation in research and informal student evaluation. A distinctive part of each student's course work is Physics 303, a research apprenticeship, that introduces students to different research groups beginning in the first year of graduate studies.

Beginning graduate students take a placement examination that tests their knowledge of undergraduate physics. Students failing this examination may be required to take remedial courses before entering fully into the graduate program, and may be asked to fulfill the requirements of the M.A. before proceeding to the Ph.D.

To receive the M.A. degree students must satisfy the general University residence and course requirements, pass with a grade of B- or better four of the basic graduate courses (Physics 301, 302, 305, 306, 309, or 310) and one semester of Physics 303, and pass two oral examinations in the subject matter of the basic graduate courses. In contrast to the M.A. physics programs at many other universities, M.A. candidates must also complete a thesis based on original research.

To receive the Ph.D. degree students must fulfill university residence and course requirements, pass with a grade of B or better the basic graduate courses (Physics 301, 302, 305, 306, 309, and 310) and three semesters of Physics 303. The department does not rely on a formal written qualifying examination to evaluate student readiness for Ph.D. research. Instead, students must pass four oral examinations that stress qualitative as well as quantitative aspects of the subject matter of the basic graduate courses. Students must also pass at least one graduate course in a subject other than physics and complete a dissertation based on original research. Students entering with advanced standing and transferable credit are encouraged to demonstrate proficiency in the basic graduate courses through oral examinations.

Graduate students in both the M.A. and Ph.D. programs are required to obtain supervised teaching experience either as teaching assistants or teaching fellows in the department, or elsewhere if approved by the department.

Further information on the research interests of the faculty and research opportunities for graduate students can be found in the departmental brochure, Graduate Study and Research in Physics at Clark. Copies are available upon request from the graduate student advisor.

Application forms for admission and financial aid may be requested from the chair of the department. During the academic year, financial support is available in the form of tuition remissions, teaching assistantships and research assistantships. The department considers the financial support of its graduate students an important responsibility.

ASTRONOMY COURSES

Refer to course descriptions under Astronomy.

001 EXPLORING THE UNIVERSE

Mr. Davies/Offered every fall

002 THE PLANETS AND SPACE EXPLORATION

Mr. Davies/Offered every spring

■ PHYSICS COURSES

100 EINSTEIN AND HIS IDEAS/FIRST-YEAR STUDENT SEMINAR-LECTURE, DISCUSSION, LABORATORY

This course will discuss the space-time concepts associated with relativity and gravitation and Einstein's contribution to the development of quantum theory. If time permits, we will also discuss ideas associated with chaos, probability, and randomness. In addition, we will discuss Einstein's views on social, political, and philosophical issues and his influence on contemporary culture. No special competence or background in mathematics and physics is necessary or assumed for the course. Mr. Gould/offered periodically

102 DISCOVERING PHYSICS/ LECTURE, LABORATORY

The course emphasizes hands-on laboratory experience and the learning of science in a way that is consistent with how science should be taught to children and how scientists gain new knowledge. Although the course is designed to be useful to students interested in education, it is open to all undergraduates and no special expertise in mathematics and science is assumed. The main topics of interest are electricity and magnetism and wave phenomena with an emphasis on the properties of light. The course is cross-listed with Education 254, but all undergraduate students, regardless of major, are encouraged to enroll in Physics 102. Several laboratories and group discussions per week. The course satisfies the scientific perspective requirement in the Program of Liberal Studies. Mr. Blatt, Mr. Gould/Offered every year

110 INTRODUCTORY PHYSICS – PART I/LECTURE, DISCUSSION

This is an introductory-level, problem-oriented course intended for science majors and the general student desiring a survey of physics. The course stresses the simplicity and self-consistency of physical models in explaining a variety of physical phenomena. Topics discussed include Newtonian mechanics, wave motion, and an introduction to the thermal properties of matter. Calculus is not required although elements of calculus will be introduced during the course. The course may be followed by either Physics 111 or 112, depending on the particular goals of the student. Physics 110 together with Physics 111 fulfills the usual entrance requirements for medical and dental schools. There are three lectures and one discussion section per week. This course satisfies the formal analysis (FA) requirement in the Program of Liberal Studies Mr. Agosta, Mr. Kohin, Mr. Blatt/Offered every fall

111 INTRODUCTORY PHYSICS – PART II/LECTURE, DISCUSSION, LABORATORY

A continuation of Physics 110. Topics include electricity, magnetism, optics, relativity, atomic physics, and nuclear physics. Students who do not intend to take a second year of physics should enroll in this course instead of Physics 112. Three lectures and one discussion section are scheduled each week. Physics 111 laboratory is designed to fulfill the usual entrance requirements for medical and dental schools. This course satisfies the scientific perspective requirement for the Program of Liberal Studies. Mr. Agosta, Mr. Davies, Mr. Kohin, Mr. Landee/Offered every spring

112 CLASSICAL PHYSICS/LECTURE, DISCUSSION, LABORATORY

This course is a continuation of Physics 110 for students desiring a more in-depth introduction to physics. The topics of electricity, magnetism, and light and optics are explored in greater depth than in Physics 111. Physics 112 is the recommended second semester course for physics, mathematics and other science majors who intend to continue with Quantum Physics, Physics 113. Three lectures and one laboratory per week. Credit is not given for both Physics 111 and 112. This course satisfies the scientific perspective requirement of the Program of Liberal Studies. Permission of the instructor is required for entry. Corequisite: Mathematics 121 or 125. Mr. Landee/Offered every spring

113 QUANTUM PHYSICS–SEMINAR I/SEMINAR, LABORATORY

This course is the third semester of a four semester introductory survey of physics, and normally follows Physics 111 or 112. The seminar meets for three hours per week plus one afternoon of laboratory work. The course begins with a review of classical electromagnetism and radiation and then treats the experimental basis for Einstein's special theory of relativity and the quantum nature of light. Key experiments involve the measurement of the speed of light, the increase of electron mass with speed, photon counting techniques, and photon interference. The course involves both lectures and student presentations, and seeks to train students in the art of oral and written expression of scientific ideas. This course satisfies the scientific perspective requirement of the Program of Liberal Studies. Prerequisites: Physics 111 or 112, Corequisite: Mathematics 130. Mr. Geschwind, Mr. Kohin/Offered every fall

114 QUANTUM PHYSICS–SEMINAR II/SEMINAR, LABORATORY

This seminar is the fourth semester of an introductory survey of physics and is intended to follow Physics 113. The seminar nature of Physics 114 continues the pattern of extensive oral and written presentations established in Physics 113. The seminar meets for three hours per week and an afternoon of laboratory work. Students are encouraged to design their own experimental approaches. Physics 114 emphasizes the experimental basis of nuclear and atomic structure leading to the theoretical development of wave mechanics. Laboratory work employs modern research instrumentation to address the important contributions by Einstein, Rutherford, Compton, Moseley, Chadwick, and others. A special section deals with the technological application of nuclear fission and fusion. This course satisfies the scientific perspective requirement of the Program of Liberal Studies. Prerequisite: Physics 113, Corequisite Mathematics 131. Mr. Geschwind, Mr. Blatt/Offered every spring

115 COMPUTER SIMULATION LABORATORY/DISCUSSION, LABORATORY

This course introduces students to the essential methods of computer simulation and its diverse applications. The course is project-oriented, with students proceeding at their own pace depending on their background and interests. Projects include the simulation of planetary motion, chaotic systems, fractal phenomena, simple random systems, and thermal systems. Methods include the numerical solution of differential equations and Monte Carlo techniques. The course also emphasizes the understanding of algorithms and structured programming, and is recommended for prospective physics majors as an introduction to computer programming rather than Computer Science 101. Two laboratory sections and two discussion periods per week. This course satisfies the scientific perspective requirement of the Program of Liberal Studies. No background in computer programming is necessary. Prerequisites: Physics 110, Mathematics 120, or permission of the instructor. Mr. Gould/Offered every spring

123 STATISTICAL AND THERMAL PHYSICS/LECTURE, DISCUSSION

This course introduces the concepts and techniques of statistical and thermal physics including statistical mechanics, thermodynamics, and kinetic theory. The goal of the course is to understand the behavior of macroscopic systems in terms of their basis in atomic theory. Topics treated include probability concepts, entropy and the second law of thermodynamics, the Boltzmann probability distribution, the thermodynamics of fluids and magnets, heat and work, and the first and second law efficiencies of simple engines. Prerequisite: Physics 113; corequisite: Mathematics 131. Mr. Gould/Offered every fall

130 ENERGY AND THE ENVIRONMENT/LECTURE, DISCUSSION

This course will investigate the physical considerations that underlie processes that are important in the local, national, and global environments, and will provide a set of representative case studies to demonstrate how these energy concepts are applied to real-world situations. The central role of energy production, distribution, and consumption in human activities, and the range of social, economic, and political impacts that follow from this inescapable fact will be emphasized. This course is cross listed with ETS 130. Mr. Blatt/Offered periodically

161 THEORETICAL PHYSICS I/ LECTURE, DISCUSSION

Physics 161 and 162 constitute an introduction to the concepts of classical physics. Topics considered in Physics 161 include particle and rigid body mechanics, and the development of electro- and magnetostatics. The necessary mathematical methods are introduced and applied. Prerequisites: Mathematics 131 and Physics 111 or 112. Mr. Davies/Offered every year

162 THEORETICAL PHYSICS II/ LECTURE, DISCUSSION

This course is a continuation of Physics 161. Topics covered include the development of electrodynamics through Maxwell's equations and relativity. Useful mathematical methods are developed. Prerequisite: Physics 161. Mr. Landee/Offered every year

174 ATOMIC AND NUCLEAR PHYSICS/LECTURE, DISCUSSION

This intermediate-level course provides an introduction to quantum mechanics. Basic principles are introduced, and the theory is applied to the study of atoms, nuclei, molecules and solids. Prerequisites: Physics 114 and Mathematics 131. Mr. Agosta, Mr. Landee /Offered every year

201 CLASSICAL DYNAMICS/ LECTURE, DISCUSSION

This course is designed to prepare students for graduate work in physics. Topics covered include Hamilton's principle, classical scattering theory, rigid body motion, canonical transformations, Hamilton-Jacobi theory, and mathematical methods of physics. Prerequisite: Physics 161 and 162. Mr. Davies/Offered every year

202 ELECTRODYNAMICS/ LECTURE, DISCUSSION

This course is designed to prepare students for graduate work in physics. Topics covered include boundary value problems in electrostatics and magnetostatics, electromagnetic field equations and special relativity, electromagnetic waves, radiation theory, multipole fields, and mathematical methods of physics. Prerequisite: Physics 162. Mr. Davies/Offered every year

205 QUANTUM MECHANICS–PART I/LECTURE

Physics 205 and 206 constitute a comprehensive introduction to the concepts of quantum mechanics and their application in physics and chemistry. The goal of this yearlong course is to prepare students for graduate work. The lectures are the same as in Physics 305, but assignments and evaluation are separate. Prerequisites: Physics 174 and Mathematics 131. Staff/Offered every year

206 QUANTUM MECHANICS–PART II/LECTURE

Physics 206 is a continuation of Physics 205. Prerequisite: Physics 205. Staff/Offered every year

209 STATISTICAL MECHANICS/ LECTURE, DISCUSSION

This course is designed to prepare the physics major for graduate work in physics. Lectures are the same as in Physics 309, but evaluation is separate. Prerequisites: Physics 123 and 174. Mr. Gould, Mr. Phillies/Offered every year

215 ADVANCED COMPUTER SIMULATION LABORATORY

This course is similar in nature to Physics 115 but treats topics at a more advanced level. The course is suitable for graduate students in the sciences or undergraduates who have completed Physics 115. Prerequisite: Physics 115 or permission of the instructor. Mr. Gould/Offered every spring

219 ELECTRONICS LABORATORY

This is an advanced laboratory course designed to teach the principles of modern electrical measurement and control. Basic skills such as the fundamentals of DC and AC circuit theory and use of test instruments such as multimeters and the oscilloscope are discussed. Emphasis is on electronic circuit design, operational amplifiers, and digital circuits. Two lectures and one laboratory each week. This course is suitable for graduate students in the sciences or upperlevel undergraduates. Mr. Agosta/Offered every fall

290 SENIOR SEMINAR/SEMINAR

This capstone covers a selection of topics of current interest in physics. Offered for variable credit. Staff/Offered periodically

299 SEC. 1 DIRECTED READINGS IN PHYSICS

These directed readings in physics will provide for special needs not covered in regular courses. Offered by arrangement and for variable credit. Staff/Offered every semester

299 SEC. 5 SPECIAL PROJECTS IN PHYSICS I

This is an independent research project in experimental, theoretical, or applied physics, done under the guidance of a faculty advisor. It is normally taken in the senior year to fulfill the senior project requirement. Students may enroll more than once in Physics 231 if they begin a new project under a different faculty advisor. Students in continuing projects should enroll in Physics 232 and 233. Offered for variable credit. By permission of the faculty advisor. Staff/Offered every semester

299 SEC. 5 SPECIAL PROJECTS IN PHYSICS II

This course is the second semester continuation of Physics 231 for students engaged in an ongoing research project under the same faculty advisor. Offered for variable credit. Prerequisites: Physics 231 and permission of the advisor. Staff/ Offered every semester

299 SEC. 5 SPECIAL PROJECTS IN PHYSICS III

This course is the third semester continuation of Physics 231 and 232 for students engaged in an ongoing research project. Offered for variable credit. Prerequisites: Physics 232 and permission of the advisor. Staff/ Offered every semester

301 CLASSICAL DYNAMICS

A graduate-level course in classical mechanics. The topics covered are similar to Physics 201 but treated in greater depth. Mr. Davies

302 CLASSICAL ELECTRODYNAMICS

A graduate-level course in classical electromagnetic theory. The topics covered are similar to Physics 202 but treated in greater depth. Mr. Davies

303 RESEARCH APPRENTICESHIP

A research apprentice actively participates in an experimental or theoretical research group of the department. Ph.D. students should enroll in the course for three semesters with a minimum of one semester in a theoretical group and one semester in an experimental group. M.A. students take a minimum of one semester. Staff

305 QUANTUM MECHANICS–PART I/LECTURE, DISCUSSION

Physics 305 and 306 constitute a comprehensive introduction to the concepts of quantum mechanics and their application in physics and chemistry. Topics treated include the foundations of quantum mechanics, symmetries and angular momentum, particle in a central potential, electron spin, and perturbation theory. Staff

306 QUANTUM MECHANICS–PART II/LECTURE, DISCUSSION

Physics 306 is a continuation of Physics 305.

Topics discussed include scattering theory, interaction of radiation with matter, second quantization, applications to simple atoms and molecules, and an introduction to many-body theory. Staff

309 STATISTICAL MECHANICS/ LECTURE, DISCUSSION

This is a comprehensive course in statistical mechanics with applications to physical and chemical systems. Topics discussed include ensemble theory, the statistical basis of thermodynamics, quantum statistics, the cluster expansion of a classical gas, ideal Bose and Fermi systems, applications of the renormalization group to the Ising model and linear polymers, and fluctuation theory. Mr. Gould, Mr. Phillies

310 SOLID STATE PHYSICS/ LECTURE, DISCUSSION

This course surveys the important experimental properties of solids and introduces students to the quantum theory of solids. Topics include crystal and reciprocal lattice structures, the free electron theory of metals, electronic band structure and the Fermi surface, lattice vibrations, and the elementary excitations of solids. Prerequisite: Physics 305, or permission of instructor. Mr. Klein, Mr. Landee

317 SOLID STATE SPECTROSCOPY/SEMINAR

A theoretical and experimental review of the physics of solids observed using spectroscopic methods. Staff

319 ADVANCED STATISTICAL MECHANICS/LECTURE, DISCUSSION

This course treats the statistical mechanics of interacting systems including the theory of critical phenomena and kinetic theory. Other advanced topics of current research interest will also be discussed. Prerequisite: Physics 309. Mr. Gould

320 ADVANCED SEMINAR IN PHYSICS

This course provides for special coverage of topics in physics of current research interest. Offered for variable credit. Staff

325 RESEARCH SEMINAR

A student participation seminar in current research problems. Offered for variable credit. Staff

390 COLLOQUIUM

Weekly invited lecturers speak on research topics of current interest. Required for all graduate students. Not offered for credit. Staff

398 RESEARCH

Thesis and dissertation preparation. Offered for variable credit. Staff

Psychology

■ DEPARTMENT FACULTY

James D. Laird, Ph.D., chair: emotional experience, self-perception, attributions to others, structures of person awareness, world hypotheses as personality variables

Sandra T. Azar, Ph.D.: high risk families, parenting, child abuse, and developmental skills underlying self-control, adolescent depression, legal issues and the family

Michael Bamberg, Ph.D.: first and second language acquisition, narratives, discourse analysis, cross-linguistic/cross-cultural comparison

Nancy Budwig, Ph.D.: language development, the development of categories of human action, socialization

Leonard Cirillo, Ph.D.: holistic developmental approach to metaphor, psychotherapies

Joseph H. deRivera, Ph.D.: the structure and function of different emotions, the relationships between emotion and action, the social psychology of peace and justice

Wendy S. Grolnick, Ph.D.: motivation and development, self-regulation of emotion and behavior in infancy and early childhood, parent and teacher influence on children, motivation, and adjustment, child clinical psychology

Rachel Joffe Falmagne, Ph.D.: deductive inference and language, logical development

Bernard Kaplan, Ph.D.: developmental orientation to, and analysis of, all psychological activities and operations in groups and in individuals

James P. McHale, Ph.D.: Co-parenting and whole family dynamics, gender and psychopathology, children's understanding of relationships, community psychology and prevention

Thomas A. Schoenfeld, Ph.D.: developmental psychobiology, olfaction, neuroanatomy and behavior

David A. Stevens, Ph.D.: taste and smell, psychophysics, discrimination learning

Nicholas S. Thompson, Ph.D.: social behavior and communication of crows, bluejays, and mimic thrushes; evolutionary theory and behavior

Ina C. Uzgiris, Ph.D.: cognitive development, parent-infant interaction and communication, self-other relations in cultural perspective

Marianne Wiser, Ph.D.: visual perception; cognitive development, especially concept acquisition

■ ADJUNCT FACULTY

Sharon Griffin, Ph.D.

Linda Kennedy, Ph.D.

■ AFFILIATED FACULTY

John Bateman, Ph.D.

Robert A. Ciottone, Ph.D.

Ronald Cohen, Ph.D.

Craig Ferris, Ph.D.

Edith F. Kaplan, Ph.D.

Eydie Kasendorf, Ph.D.

Deborah S. Kellett, Ph.D.

Robert J. O'Connell, Ph.D.

Marlene Oscar-Berman, Ph.D.

Alan Rosenbaum, Ph.D.

Georgia Sassen, Ph.D.

■ RESEARCH ASSOCIATES

Cathleen Crider, Ph.D.

Jonathan Demick, Ph.D.

Mark Quirk, Ed.D.

Mary Walsh, Ph.D.

EMERITUS FACULTY

Robert W. Baker, Ph.D.

Seymour Wapner, Ph.D., chair, Executive Committee, Heinz Werner Institute

Morton Wiener, Ph.D.

FRANCES L. HIATT SCHOOL OF PSYCHOLOGY

In 1987 the Frances L. Hiatt School of Psychology was formed. This school has a major endowment provided through the generous support of the Hiatt family. The school, which encompasses the Department of Psychology, with the Heinz Werner Institute for Developmental Analysis, and the Department of Education, provides additional opportunities for students entering the graduate program in either department. In addition to Frances L. Hiatt Graduate Fellowships, opportunities for organizing and attending conferences are available, as are support for travel and research activities for the school's faculty and students.

THE HEINZ WERNER INSTITUTE FOR DEVELOPMENTAL ANALYSIS

Associated with the department is the Heinz Werner Institute for Developmental Analysis, which has three aims: first, to integrate various research programs dealing with developmental problems; second, to bring to Clark University scholars, teachers, and research workers from disciplines for which developmental problems are pertinent, such as anthropology, biology, and certain areas of medicine; and third, to train research workers on postdoctoral levels in the comparative-developmental approach to behavior. For more information, write to Dr. Seymour Wapner, chair of the institute's Executive Committee.

UNDERGRADUATE PROGRAM

The Department emphasizes the role of psychological scholarship in understanding human behavior and experience. The aims of the undergraduate program are: to promote respect for intellectual activity, to encourage an attitude of intelligent inquiry, and to highlight the implications of psychological knowledge for an understanding of everyday phenomena. The Department provides educational experiences that both contribute to liberal arts education and prepare students for graduate work in psychology or related disciplines. The Department offers a variety of perspectives on psychology in its introductory and upper-level courses.

Course Numbers:

Ranges of course numbers have specific meanings according to the following key:

Range	Meaning
100-109	*Courses all majors must take*
110-149	*Survey courses, psychology as a life science*
150-189	*Survey courses, psychology as a social or human science*
190-199	*Special freshman and sophomore courses*
200-214	*Laboratory courses*
215-229	*Research courses*
240-259	*Primarily junior and senior specialized seminars (may not be taken for graduate credit without special permission)*
260-299	*Primarily senior and graduate specialized seminars (may be taken for graduate*

credit without special permission)

299 Special courses (honors, directed readings, research, practicum)

Unless otherwise stated, Psychology 101 is a prerequisite to all 200-level psychology courses. Psychology 105 and 107 are prerequisites for all other Psychology labs and research courses unless otherwise stated.

■ MAJOR REQUIREMENTS

The major in psychology consists of (1) psychology course requirements and (2) a related field requirement.

The psychology course requirements are designed to ensure exposure to one of the most basic distinctions in contemporary psychology, that of psychology approached as a life or a social, or human science; to ensure some familiarity with experimental and observational methods (Psychology 107 and the laboratory requirement); to provide background in essential quantitative skills (Psychology 105); and to provide capstone experiences for every psychology major. Students may fulfill the capstone requirement in Psychology extensively, or intensively. Seminars and Directed Readings courses in the Department provide an extensive capstone by relating one of the subject matters in Psychology to general issues in the field and, in many cases, to related fields as well. Research projects, Directed Research courses and Honors projects provide an intensive capstone by permitting the student to participate in the details of a research project including conceptualization, design, data collection, interpretation, and preparation for public presentation.

The related field requirement reflects the conviction of the department that all academic areas are actually or potentially related to psychology, and that understanding the relation between psychology and another discipline requires knowing that other discipline in considerable depth.

(2) Psychology Requirements

Total of at least eight full-course equivalents, including:

a. 101 General Psychology or 155 Psychology as a Human Science

b. 105 Quantitative Methods

c. 107 Approaches to Psychological Research

d. One full-course equivalent from range 110-149 (survey courses, psychology as a life science)

e. One full-course equivalent from range 150-189 (survey courses, psychology as a social or human science)

f. One full-course equivalent from range 200-229 (laboratory and research courses)

g. Two full-course equivalents from range 240-299 (upper-level seminars)

Note that the Department currently offers two entirely different and non-overlapping introductory courses. Either Psych 101 or Psych 155 fulfills the introductory requirement for the purposes of the Psychology major. But students, in planning their major program, should pay close attention to the prerequisites of upper-level courses: some upper-level courses take Psych 101 as a prerequisite, some take Psych 155. Thus, a student who is planning to take a full range of Psychology offerings at the upper level may want to take both introductory courses.

(2) The related field requirement. At the time of Major Declaration, a student will choose for his/her related field a recognized 6-course concentration or minor. Students should think carefully about and be prepared to articulate the relationship between their interests in their major, their career goals, and their related field. Alternatively, a student may adopt as a related field any pattern of six courses that his or her psychology advisor has approved as providing depth of knowledge in a discipline related to psychology.

■ DECLARING A PSYCHOLOGY MAJOR

A student wishing to declare a psychology major should come to the Department Office in the spring of his/her sophomore year to sign a major declaration form and be assigned a Psychology advisor. Students desiring to declare a Psychology major are strongly advised to attend a Major Declaration Workshop which will be held each March where faculty, staff, and advanced undergraduate majors will be available to help with planning major programs that are coherent and related to a student's career and other interests.

■ THE HONORS PROGRAM

Honors work in psychology is available to seniors who have demonstrated high scholastic achievement and the ability to work independently in scholarly situations. Students may seek admission to the honors program by requesting the faculty member under whose direction they intend to do research work to submit their names to the full faculty for consideration. Students in the honors program carry out an independent empirical research project under the sponsorship of one or more faculty members. This research provides a basis for a thesis which, upon completion, is presented and defended by the student before an examining committee of faculty members. On the basis of the report of the examining committee and the student's advisor for the project, the department may recommend that the students be awarded departmental honors at one of the following levels: highest honors, high honors, or honors in psychology. Students interested in departmental honors in psychology should make arrangements with a faculty sponsor during the second semester of their junior year, enroll in Psychology 299 for the two semesters of their senior year, and be formally admitted to the program no later than the beginning of their senior year.

■ DOCTORAL PROGRAM

General Requirements

The department admits to graduate work only those students who plan to enroll in the Ph.D. program on a full-time basis. The overall aim of the graduate program is to provide students with a general integrated background covering the various areas of psychology. Specialization in several areas of study is available.

Although a small department cannot reflect the entire spectrum of perspectives toward the study of psychology that one finds in the United States, a considerable number of theoretical orientations are exemplified by the various members of the department. The most important feature of the department's intellectual ethos is an emphasis on theoretically grounded inquiry and conceptually and methodologically rigorous research. In all of the department's programs, including the clinical program, there is a deep concern with conceptual analysis and theoretically grounded and directed inquiry. The department is perhaps unusual on the American scene in the diversity of methods of investigation used by faculty and graduate students in their work and the range of problems taken to fall within the purview of psychologists. Students are acquainted not only with traditional experimental and naturalistic methods, but also with phenomenological, structural, hermeneutic, and other methodologies.

Participation in research is strongly encouraged throughout the graduate experience, the nature of the research being determined by interests a student shares with faculty members. Students are expected to contribute significantly to problem formulation, conceptualization, methodology, analysis, and write-up of research work.

Advisors

A faculty advisor will be assigned to help each student plan a curriculum to best meet individual needs and goals. The advisor may change or waive any of the requirements of specific training programs with department approval, but ordinarily the advisor's function is to assist students in selecting a curriculum from within the normal requirements.

Information on other kinds of committees and advisors encountered during graduate work is available in the graduate program brochure.

Coursework

Students ordinarily are expected to take four courses in each semester for their first two years, including Problem, Theory, and Method in Psychology (301) and Statistical Methods (302) in their first year. In subsequent years, students continue to enroll in a full program which ordinarily includes two or three content courses and research and reading courses. A total of at least eighteen one-semester content courses is required for admission to candidacy for the Ph.D. There are special course distribution requirements in effect for clinical students, and clinical applicants should consult the section on Training in Clinical Psychology for information about course requirements. Content courses include: all graduate seminars; clinical methods courses; Statistical Methods; Problem, Theory, Method; and courses numbered 240-296; but do not include research and readings courses unless approved by special petition to the department, nor practicum courses (e.g., 380-389).

Research in the First Year

To encourage each student to become actively involved in research from the beginning of graduate training, a research apprenticeship program exists through which faculty and students can voluntarily begin working on research together during the first year. Participating faculty provide a brief description of current research projects in which students can become involved or notify students about when their project meetings are held. During the first two weeks of each semester students have the opportunity to consider these projects and contact a faculty member to discuss becoming an apprentice in the described research project.

Qualifying Papers

To provide a basis for evaluation of a student's scholarly qualifications for admission to Ph.D. candidacy, all students are required to write four scholarly papers, one during each of the four semesters in the first two years in residence. Each paper should be prepared for reading by a different full-time faculty member in the Psychology Department. The topic for each paper is to be agreed upon by the student and the reader. Written examinations and ordinary term papers for courses will not be accepted to satisfy this requirement. All papers must be of reasonable length commensurate with the topic. A copy of each paper is placed in the student's file. Students are encouraged to submit at least one of the four papers for publication in a scholarly journal. All papers must be submitted and evaluated prior to scheduling the oral examination on the M.A. thesis.

Qualifying Examination in Statistical Methods

All students are required to demonstrate competence in statistical methods by satisfactory performance on a qualifying examination in that area. The examination is normally taken at the end of the student's first year, at the completion of the course in statistical methods.

M.A. degree

The M.A. degree, a required step in our Ph.D. program, is awarded after satisfactory completion of at least eight one-semester courses or their equivalent; the fulfillment of the departmental qualifying paper requirement; and the execution of an empirical thesis under the supervision of a faculty member and adequately defended in a one-hour examination. The thesis is expected to be relatively brief and may be written in the form of an article suitable for submission to a journal appropriate to the kind of work embodied in the research. All requirements for the M.A. degree must be completed by the end of the second year of graduate study. Students are expected to have commitments from three faculty examiners (the sponsor and two others) by June 1 to be present at an oral to be scheduled no later than June 30. Students who have not completed their M.A. degree by June 30 at the end of the second year are not permitted to enroll in courses in the third year. Instead, their status becomes Special Resident, which means they must register for Directed Readings for at least three units to be in residence while working on the M.A. requirements. Students who do not complete the M.A. degree by the end of the third year ordinarily are not permitted to continue in the Ph.D. program, but are given ample opportunity to complete a master's degree.

Major Paper and Oral Examination

The major paper is normally to be done within one year after completing the M.A. This paper is expected to demonstrate mastery of research and theory in the student's area of specialization. To facilitate completion, students are encouraged to enroll in Directed Readings with a faculty member during one or both of the semesters in which the paper is to be completed. Students are expected to meet with the sponsor and two faculty readers as early as possible in the first semester of the major paper year so that all are in agreement with the plan for the paper and their roles in it. An oral examination on this material will be held shortly after the paper has been submitted. If the paper is not finished on time, the faculty will select some of its members to give additional help to these students during the summer. Students who do not complete the paper by the end of the third year will not be permitted to enroll as resident students for the fourth.

Admission to Ph.D. Candidacy

Satisfactory completion of at least eighteen one-semester content courses (including 301 and 302), as well as the above requirements, is necessary for admission to candidacy for the Ph.D. degree. All the requirements for Ph.D. candidacy, including the major paper, must be met within two years of completing the M.A. Students who do not do so may be dropped from the Ph.D. program.

Ph.D. Dissertation

Students demonstrate the ability to conduct research by the presentation of an acceptable dissertation. The topic of the dissertation usually is selected by students working with one or more members of the faculty. Once students have worked out a general research plan, a dissertation committee is formed to supervise and assist in all phases of the research effort, from articulation of the research design to the write-up of the final draft. After the committee has reviewed the dissertation proposal carefully, the proposal is circulated to all other members of the faculty for comments and suggestions. The dissertation committee then has the authority and responsibility to approve the final form of the proposal before students undertake the actual research. After completion of the research, students submit a draft of the dissertation to the committee, which will aid students in making necessary revisions. At the point that the committee decides that the dissertation is complete and ready for presentation, copies of the dissertation are made available to the entire department faculty.

Ph.D. Oral Examination

Following submission of the dissertation to the department, a final two-hour oral examination is held in which students present and defend their dissertation and show competence in a general field of psychology as well as in their area of specialization.

These guidelines result in an upper limit of six years for completion of the Ph.D. (excluding an internship year or official leave). An additional year may also be granted by faculty approval of a petition on other grounds such as part-time study because of financial necessity. Those desiring more detail on graduate requirements and their timing should request a copy of Information on the Graduate Program in Psychology.

Graduate Training in Clinical Psychology

The basic philosophy in training clinical psychology students, as for all graduate students in the department, is that specialization is a process of individuation and emphasis rather than one of restriction, isolation, or compartmentalization. Our aim is to provide an integrated series of intensive educational experiences in which specialist training in clinical psychology is attained against a background of increasing competence in general psychology, theory, and research.

In addition to more traditional training, the program offers other opportunities, e.g., in child clinical and marital and family intervention. The program has, in addition to the general requirements, the following special requirements. Students must take at least one course from each of three areas: (1) biological bases of behavior (e.g., physiological psychology, behavior and evolution, human neuropsychology); (2) cognitive-affective bases of behavior (e.g., symbolism, cognitive development, logical reasoning, action and emotion); and (3) social bases of behavior (e.g., interpersonal relations, social cognition). Students must take the following courses in individual behavior: Psychopathology (311) and Theories of Psychotherapy (310). Students must complete a minimum of one year of internship in clinical settings; they may satisfy this requirement by a full-time internship in the third or fourth year or by an internship "distributed" part time over several years. All clinical students participate for four years in practicum training offered at the University and other agencies. For further information contact the Director of Clinical Training, Dr. Sandra T. Azar.

Graduate Study in Developmental Psychology

The developmental psychology curriculum is intended to prepare students for a career in research, teaching, and scholarly activity. It strives to impart both theoretical sophistication and competence in observational, experimental, interpretative, and comparative inquiry with regard to developmental issues. The emphasis is on ways of representing and examining all life phenomena rather than focusing exclusively on a particular population (e.g., infants, children, adults) or a specific subject matter. Within this general framework, however, in-depth training is offered with particular populations and in specific areas (communication, language, symbolization, social relations, parent-infant interactions, cognition, logical reasoning, psychopathology, collective phenomena, and others). In addition to requirements common to all graduate students, those with a concentration in developmental psychology are required to take the Developmental Psychology Forum.

Since there are no sharp separations between different areas within the department, students who work primarily in developmental psychology have the opportunity to study with other faculty in the department who have an interest in their area of specialization. For further information contact Dr. Ina C. Uzgiris.

Graduate Study in Social-Personality Psychology

Perhaps the most distinctive feature of the social-personality curriculum is its emphasis on the description and analysis of social experience and action. The faculty members most directly involved have developed different research strategies that tap into the experiences of everyday life and the development of moral action. They focus on the social-emotional aspects of interpersonal relations, the role of affective experience in the choices that persons confront as they lead their lives, and the manner in which persons come to know and experience themselves. While there are no formal requirements in the social-personality area, students are expected to become acquainted with the main approaches to experience and action, and are encouraged to participate in seminars with as many different faculty members as possible. For further information contact Dr. Joseph deRivera.

Graduate Study in Cognitive and Experimental Psychology

Students may specialize in cognitive and experimental psychology through seminars covering the theoretical foundations, content, and methodology in cognition, language, and sensory psychology, as well as through specialized seminars. Some of the current interests of the faculty include logical cognition, conceptual development, cognition and instruction, language development, sensory psychology, and psychology of taste and smell.

In teaching and research the faculty reflects the values traditional at Clark, which emphasize theoretical relevance and preserving and exploring the connections among areas of specialization. Faculty and students within and across areas typically maintain extensive and regular interactions. In particular, most of the faculty have close connections with the developmental and social-personality areas, both in teaching and research.

The department also has educational and research ties with a number of institutions in the Worcester-Boston area (e.g., the Neuropsychology Unit of Boston Veterans Administration Hospital, the Worcester Foundation for Experimental Biology, the University of Massachusetts Medical School), as well as other departments at Clark.

For further information contact Dr. Marianne Wiser.

Graduate Study in Psychobiology

Students admitted to the Graduate Program in Psychology may elect to concentrate their studies and research in psychobiology. This area of specialization is closely allied with cognitive and experimental psychology in examining the processes of sensation and perception, learning, and social communication, among others, but places a particular emphasis on the biological aspects of these phenomena, utilizing especially the perspectives and techniques of neurobiology, physiology, and ethology. Formal coursework draws on offerings in psychobiology, cognitive and experimental psychology, neuroanatomy, and neuropsychology by our department and offerings in neurophysiology, neurochemistry, and molecular neurobiology in the departments of Biology and Chemistry. Together, these courses also form the curriculum for the University's Neuroscience Program.

Opportunities for research in psychobiology exist within the Department of Psychology, the Departments of Biology and Chemistry and at affiliated academic institutions in the Worcester Consortium, particularly at the Worcester Foundation for Experimental Biology and the University of Massachusetts Medical School. Current research interests of affiliated faculty concern some aspect of either the chemical senses (taste and smell), social communication, or development. For further information, contact Dr. Thomas A. Schoenfeld.

■ POSTDOCTORAL TRAINING

The Psychology Department and the Heinz Werner Institute provide postdoctoral training. In addition to individually oriented research and training opportunities, seminars are available for postdoctoral students.

■ COURSES

101 GENERAL PSYCHOLOGY/ LECTURE, DISCUSSION

Introduction to the principles of human behavior. No prerequisite. Unless otherwise noted, this course is a prerequisite to all other psychology offerings. Mr. Laird, Mr. McHale/ Offered every semester

105 QUANTITATIVE METHODS/LECTURE

Introduction to the theory and methods of statistical inference, logic of experimental design, and the use of computer statistical packages. Psychology 101 is a prerequisite. Staff/Offered every semester

107 APPROACHES TO PSYCHOLOGICAL RESEARCH/ LECTURE, DISCUSSION

This course focuses on the role of research in psychological thought and theoretical development, research methods, and the principles of experimental design. The methods discussed cover the range of those used by psychologists. They include those of qualitative analyses and hermeneutics as well as the traditional experimental methods. This course is a prerequisite for all laboratory or research courses, unless otherwise noted. Mr. Bamberg, Mr. Stevens/Offered every semester

110 INTRODUCTION TO PSYCHOBIOLOGY/LECTURE

The biological foundations of behavior and mental processing are presented, with particular emphasis on achieving both a working knowledge of the intricacies of brain function and an understanding of the scientific process by which brain-behavior relationships are studied and elucidated. Topics include: the architecture of the brain, how drugs affect the nervous system, the senses and the neural basis for perception, the role of hormones in sexuality and stress, the duality of consciousness, the biological bases of social communication, the neural mechanisms for storing and retrieving memories, and the psychological consequences of neural dysfunction. Students who would like a more rigorous treatment of both neurobiology and psychobiology should take Neuroscience I and II (Psych 140 and 141). Mr. Schoenfeld/Offered every year

120 HUMAN COGNITION/LECTURE

Introduction to the study of concepts, memory, language, reasoning, and other higher mental processes. The course provides an introduction to the general perspective, the current theoretical questions and the empirical findings in the field of cognitive psychology concerning those processes/functions. Objectives are to introduce students to the content area and the theoretical issues; to stimulate students' critical thinking regarding the relation between theory and evidence; and to develop in students a basic literacy in the area as well as the capacity to think further about questions of interest to them. Ms. Joffe Falmagne/Offered every year

130 PSYCHOLOGY OF LEARNING/LECTURE

Methods and findings in the study of learning are discussed, with emphasis on their relation to theories of learning. Selected controversial issues are examined. Mr. Stevens/Offered periodically

135 THE PARADOX OF ANIMAL SOCIALITY/LECTURE

Evaluates a new evolutionary perspective called sociobiology by examining Darwinian theory as it applies to animal social organizations. The course redefines such concepts as natural selection, adaptation, communication, personality, emotions, grouping, and territoriality as they apply to animal behavior. This course is run with much class discussion and emphasis on questioning theories, constructing new models, and arriving at new, clearer definitions. Prerequisite: Introductory biology or psychology normally required, but open to freshmen with special qualifications; please see instructor. Mr. Thompson/Offered every year

140-141 NEUROSCIENCE I AND NEUROSCIENCE II/LECTURE

A two-semester, two-credit course, covering the basic neurosciences and brain/behavior functions. The courses are taught by staff from the Psychology and Biology departments, and guest lecturers from the University of Massachusetts Medical School and the Worcester Foundation for Experimental Biology, among others. Prerequisites: Psychology 101 and Biology 100. Staff/Offered every year

142 SENSATION AND PERCEPTION/LECTURE

The five senses are studied with special emphasis on visual perception. Focus is on the processes by which information is picked up from the environment and then coded, transformed, and integrated by the sensory systems. Topics include: the neurophysiology of each sensory system, basic visual and auditory functions, pattern perception, distance and size perception, color, visual illusions, and perceptual development. Ms. Wiser/ Offered every year

150 DEVELOPMENT IN CHILD AND ADOLESCENT/LECTURE

The development of intellectual and social functioning in the child and adolescent is discussed. Theoretical approaches to conceptualizing change in the developing child are emphasized and contrasted in light of current studies. Mr. Bamberg, Ms. Budwig, Ms. Uzgiris/Offered every year

155 PSYCHOLOGY AS A HUMAN SCIENCE/DIALOGICAL FORMAT

A close examination of attempts by scholars from a wide variety of disciplines (philosophy, history, literature and literary criticism, anthropology, political science, theology, linguistics, semiotics, depth psychology) to describe, understand, and explain complex human action, experience, thought, and production in everyday life. This course is intended to provide a radical alternative to much of current academic psychology, with respect to theories, problems, and methods. Given on a credit/no credit basis. Note: For Psychology majors, this course is a prerequisite for upper level psychology courses, 240, 242, 256, 260, 276, 277, 280, and 284. Psychology 101 is not a prerequisite for this course nor any of the upper level courses listed here. Mr. Kaplan/Offered every year

160 LANGUAGE, EMOTIONS, THOUGHT AND CULTURE/ LECTURE, DISCUSSION

Designed especially for freshmen and sophomores, this course investigates to what degree the human "mind" and the "soul" are sociocultural products and what role "language" plays in their formation. Specific questions addressed are to what degree languages differ from one another, whether the mind and emotions are separate faculties, and to what degree they can be viewed as parts of different cultural belief systems. The general aim of the course is to create awareness of cultural differences and commonalities, and to relate this to one's background and heritage. Mr. Bamberg, Ms. Budwig/Offered periodically

162 PSYCHOANALYTIC INTERPRETATION OF BEHAVIOR/ LECTURE, DISCUSSION

Offers students a basis for the understanding and application of psychoanalytic (Freudian) concepts. Students are challenged to interpret simple and complex conflicts in behavior. The course focuses on the way psychoanalysts reason. The final examination requires students to analyze a major literary work from a psychoanalytic perspective. Psychology 101 is not a prerequisite. Mr. Bibace/Offered periodically

170 SOCIAL PSYCHOLOGY: AN INTRODUCTION TO PEACE STUDIES/LECTURE, DISCUSSION

An examination of love, fear, conflict, and other basic processes involved in group dynamics, interpersonal relations, community psychology, intergroup relations, organizational behavior, and the interface between human nature and culture. These basic processes are related to the choices that govern the attempt to achieve a world of peace and justice. In addition to quizzes and a final exam, students are asked to apply their knowledge of basic processes by undertaking two moral actions. The first of these is on a direct personal level and deals with the ability to assert oneself, to accept others, and to take risks. The second involves dealing with the problems posed by our memberships in a world community: the reduction of hunger, poverty, prejudice, environmental degradation, nuclear and conventional arms proliferation, and the securing of human rights. Prerequisite: Psychology 101 or permission. Mr. de Rivera/Offered every year

172 PSYCHOLOGY OF PERSONALITY/LECTURE

Considers theories regarding behavioral differences among persons in response to the same or similar situations; includes typological, trait, psychoanalytic, traditional and neo-behavioristic, and personological conceptions. Staff/Offered every semester

173 INTRODUCTION TO ABNORMAL PSYCHOLOGY/LECTURE

This course begins with a discussion of the manner in which abnormal behavior has been traditionally defined and the implications of these definitions. A comprehensive overview of the major categories of abnormal behavioral disorders is then provided with an emphasis on theory and research (e.g., schizophrenia, affective disorders, substance abuse, eating disorders, etc.). Special attention is paid to issues of assessment, intervention, and prevention. Psychology 172 is a prerequisite. Ms. Grolnick/Offered every year

193 PSYCHOLOGY, COMMUNICATION, AND THE SELF/FIRST-YEAR SEMINAR

In this course we explore the foundations of such concepts as the mind, emotions and feelings, values and beliefs, language and languages, manners, and other cultural conventions, which in traditional psychology are more or less viewed as properties of the private individual. In addition we try to connect these concepts with different definitions of "the self" and explore how these concepts are expressed in different languages and communicated in different ways. The general aim of the course is to create awareness of cultural differences and commonalities and to relate this to studies in other areas. Fulfills the language perspective. Mr. Bamberg/Offered periodically

195 PURSUIT OF AN INQUIRY/FIRST-YEAR SEMINAR

Designed primarily for incoming students, this course provides an opportunity for them to pursue a piece of independent scholarship in the field of their choice. Each must write a substantial term paper by the end of the semester. Class meetings are used to clarify the exposition of ideas and to train the participants in how to exploit the resources of the community for independent scholarship. Papers may be written on any topic the writer pleases. Psychology 101 is not a prerequisite. Mr. Thompson/Offered periodically

200 LABORATORY IN ETHOLOGY/LABORATORY, DISCUSSION

The members of the class participate in

research projects on the behavioral biology of a variety of species, mostly birds. Members work in small teams each of which is devoted to the study of a single species. Enrollment is limited. This course is taught in the summer but credited in the fall. Mr. Thompson/ Offered periodically

201 LABORATORY IN SOCIAL PSYCHOLOGY/LABORATORY, DISCUSSION

General principles of experimental design are learned through the design and performance of original experiments in experimental social psychology. Both group and individual experiments are conducted in any of the usual topic areas of social psychology. Prerequisites: Psychology 105, 107, 170 and permission of the instructor. Staff/Offered periodically

202 LABORATORY IN DEVELOPMENTAL PSYCHOLOGY/ LABORATORY, DISCUSSION

A general introduction to conceptual issues related to research in the area of human development. Students participate in group research projects involving both observational and experimental techniques and will receive training in all phases of research including formulating research questions, data collection and analysis, and report writing. Prerequisites: Psychology 105, 107, and 150. Ms. Budwig/Offered every other year

203 LABORATORY IN HUMAN COGNITION/LABORATORY, DISCUSSION

Experimental studies are conducted in the area of reasoning, categorization, language comprehension, learning, and memory. This course familiarizes students with the methods used in cognitive psychology, the range of problems studied, and the theoretical concepts used to interpret experiments. The course is designed to teach research skills and scientific writing in the context of conducting closely supervised experimental projects and independent projects in cognition. Prerequisite: Psychology 105, 107 and 120. (Psychology 120 can be taken the same semester as the lab.) Ms. Joffe Falmagne/Offered every other year

204 LABORATORY IN EMOTION AND MOTIVATION/LABORATORY, DISCUSSION

Includes the design of studies to test ideas about emotions and how they influence our actions, the gathering of data, and ways to report the data to the psychological community. Prerequisite: Psychology 105, 107, permission. Mr. deRivera/Offered every other year

205 LABORATORY IN TASTE AND SMELL/LABORATORY, DISCUSSION

Concepts of experimental design and method are discussed. Experiments are conducted on the scaling of taste, smell, and flavor. An example is the comparison of the sweetness and pleasantness of different sugars. Prerequisite: Psychology 105 and 107, permission of the instructor. Mr. Stevens/Offered every year

206 LABORATORY IN PERSONALITY/LABORATORY, DISCUSSION

Issues and problems in psychological research in personality are examined, with the problems being exemplified in studies developed and performed by the class group and by individuals. Research may be in any of the conventional areas of personality research, such as perceptual defense, motives and performance, self-perception, experimenter influence, and emotions. Prerequisites: Psychology

105; 107; or 172; and permission of the instructor. Staff/Offered every year

207 LABORATORY IN ANIMAL COMMUNICATION/ LABORATORY, DISCUSSION

Using state-of-the-art sound analysis equipment, the course explores how information is encoded in the sounds of animals and humans. Permission of the instructor is required. Mr. Thompson/Offered periodically

208 LABORATORY IN CHILD PSYCHOLOGY/LABORATORY, DISCUSSION

An introduction to research methods employed in the study of children through participation in studies and data analysis carried out by the class, with reports written individually. Children's behavior is treated in relation to family and social setting, and emphasis is given to observational and interview methodologies. Prerequisites: Psychology 105, 107, and 150. Ms. Uzgiris/Offered periodically

209 LABORATORY IN STUDENT ADJUSTMENT TO COLLEGE/LABORATORY

The rationale, method, and findings of an ongoing research project at Clark investigating personological and environmental determinants of adjustment to college, with consideration of similar research elsewhere as reported in the professional literature. Relevant issues in psychological measurement are addressed, and each student does an empirical investigation pertinent to the course topic. Prerequisites: Psychology 101, 105, 107, 172 and permission of the instructor. Mr. Baker/ Offered periodically

210 LABORATORY IN LANGUAGE AND COMMUNICATION/ LABORATORY, DISCUSSION

A general introduction to conceptual issues related to research in the area of language and communication. Students participate in group research projects involving both observational and experimental techniques and will receive training in all phases of research including formulating research questions, data collection and analysis, and report writing. Prerequisite: 105, 107, permission of instructor. Mr. Bamberg/Offered every other year

211 LABORATORY IN COMMUNITY PSYCHOLOGY/ LABORATORY, DISCUSSION

Community psychology is a field concerned with the prevention of mental health problems and enhancement of individual functioning through the strengthening and empowerment of communities. Students in this course are familiarized with essential principles, methods and knowledge in the field through weekly lectures, while simultaneously collaborating with classmates and teaching staff in weekly discussion sections to design, conduct and evaluate their own community research projects. Students present their research projects and findings at a research symposium at the end of the semester. Prerequisites: Psychology 105, 107, 172 and permission of the instructor. Mr. McHale/Offered periodically

212 LABORATORY IN GENERAL PSYCHOLOGY/LABORATORY, DISCUSSION

Students develop skills investigating various aspects of human behavior and experience. No prerequisites other than Psychology 101, 105, 107 and a willingness to bring good questions to the laboratory. Permission of the instructor is required. Staff/Offered periodically

213 LABORATORY IN FAMILY PROCESSES/LABORATORY, DISCUSSION

This lab examines family-based correlates of early socio-emotional development. Both qualitative and quantitative methods are examined, and students gain experience in the use of both self-report and observational methodology for assessing individual dyadic and whole family functioning. Emphases of inquiry vary by year, but may include the study of play among infants, toddlers, or preschoolers and their family members; self and observer assessments of intimate relationships among married couples; individual and family-based correlates of children's playground behavior with peers; and other topics. Prerequisites: Psychology 105, 107, 172 and permission of the instructor. Mr. McHale/Offered periodically

214 LABORATORY IN PSYCHOBIOLOGY/LABORATORY, DISCUSSION

The principles of the scientific method are presented as a framework for learning how to design, conduct, analyze, and interpret experiments in psychobiology. Topics for laboratory investigation may include ethology of rodent social behavior, neuroanatomy of the rodent brain, neuropsychology of feeding behavior, and psychopharmacology of learning and memory. Prerequisites: Psychology 105, 107, 110 or 141; and permission of the instructor. Mr. Schoenfeld/Offered periodically

215 RESEARCH IN EMOTION AND MOTIVATION/LABORATORY, DISCUSSION

Working in close collaboration with the instructor, students design, conduct, and present a piece of research that investigates an emotional or motivational phenomenon. Prerequisite: permission of instructor. Mr. deRivera/Offered periodically

217 RESEARCH ON DEVELOPMENT IN EARLY CHILDHOOD/LABORATORY, DISCUSSION

With roots in Piaget's theories, a constructivist-interactionist approach to the study of development in infancy and early childhood is exemplified through materials from ongoing research projects. Students each formulate a pertinent study, carry it out, and prepare papers describing their work. Prerequisite: Psychology 107, 150 and permission. Ms. Uzgiris/Offered periodically

218 RESEARCH IN FAMILY DYNAMICS/LABORATORY, DISCUSSION

Students participate in the design, conduct and interpretation of experiments in an ongoing research program in family dynamics and child development. Prerequisite: permission of the instructor. Mr. McHale/Offered every year

219 RESEARCH IN PSYCHOBIOLOGY/ LABORATORY, DISCUSSION

Students participate in the design, conduct and interpretation of experiments in an ongoing research program in psychobiology. Prerequisite: permission of the instructor. Mr. Schoenfeld/Offered periodically

220 RESEARCH IN CHEMORECEPTION/LABORATORY, DISCUSSION

With the instructor, students design, conduct, and interpret research in taste, smell, and flavor. Prerequisite: permission of instructor. Mr. Stevens/Offered every year

221 RESEARCH IN SOCIAL PSYCHOLOGY/LABORATORY, DISCUSSION

Students participate in the design, execution, analysis, and interpretation of research on self-awareness and self-knowledge, including areas of emotions, attitudes, and abilities. Prerequisites: 105, 107, 170 and permission. Mr. Laird/Offered every year

222 RESEARCH IN CONCEPTUAL DEVELOPMENT/LABORATORY, DISCUSSION

Students participate in an ongoing research program in collaboration with the instructor in the area of conceptual development. Enrollment limited. Prerequisite: permission of the instructor. Ms. Wiser/Offered periodically

223 RESEARCH IN MOTIVATIONAL AND EMOTIONAL DEVELOPMENT IN INFANTS, CHILDREN, AND ADOLESCENTS/LABORATORY, DISCUSSION

Students participate in an ongoing research project on the effects of parent-child interaction on emotional and motivational development along with a research team. Students will learn about research design, analysis and interpretation of results. Participants pick a topic of interest and prepare a written paper. Prerequisites: 105, 107 and permission. Ms. Grolnick/Offered every semester

224 RESEARCH ON NARRATIVE DEVELOPMENT/LABORATORY, DISCUSSION

This course is designed to give students a training experience in an ongoing research project on the development of narratives. Prerequisite: permission of the instructor. Mr. Bamberg/Offered periodically

225 RESEARCH IN FAMILY AND CHILD/LABORATORY, DISCUSSION

Students participate in ongoing research projects with the instructor that examine family issues either with children, adolescents, or parent-child dyads. The research takes place within a cognitive behavioral framework. Prerequisite: permission of the instructor. Ms. Azar/Offered every year

226 RESEARCH IN BIOACOUSTICS/LABORATORY, DISCUSSION

The research program analyzes animal sounds to describe their form and discover their significance. Meets weekly to plan and carry out research projects. Limited enrollment. Prerequisite: permission of the instructor. Mr. Thompson/Offered every year

227 RESEARCH IN SOCIO-CULTURAL APPROACH TO MIND/LABORATORY, DISCUSSION

Students participate in an ongoing research program in collaboration with the instructor in the area of cultural and subcultural differences. Prerequisite: Psychology 289 and/or permission of the instructor. Mr. Wertsch/Offered periodically

228 RESEARCH ON DEVELOPMENTAL ASPECTS OF TRANSACTIONS OF PERSONS-IN-ENVIRONMENTS/LABORATORY, DISCUSSION

Theory, findings, and research problems deriving from an ongoing research program—a holistic-developmental, systems-oriented approach to the analysis of transactions of persons-in-environment—are discussed. Empirical studies on problems relevant to the research program are formulated and conducted by individual students. A research proposal and final report describing the research project are prepared. Ideally, the research is presented at undergraduate or professional meetings, and a manuscript is prepared for submission to a journal. Prerequisites: Psychology 105, 107, and permission of instructor. Mr. Wapner/Offered every semester

229 RESEARCH IN THE DEVELOPMENT OF LANGUAGE AND LANGUAGE SOCIALIZATION/ LABORATORY, DISCUSSION

In collaboration with the instructor, students participate in an ongoing research program in the area of language development and language socialization. Students are responsible for various phases of research, including preparing literature surveys, data analyses, and interpretation of results. Towards the end of the semester, students prepare a written paper describing their work. Prerequisite: permission of instructor. Ms. Budwig/Offered periodically

240 DEVELOPMENTAL APPROACHES TO BEHAVIOR/SEMINAR

A critical examination of the presuppositions, methods, and empirical inquiries of those concerned with the developmental analysis of diverse kinds of behavioral systems or aspects of systems. The course also focuses on recent critiques of developmental theories in general (e.g., Foucault, Derrida, Kaplan) as well as critiques (e.g., Carol Gilligan) of specific developmental approaches. Open to juniors and above. Enrollment limited. Prerequisites for undergraduates: Psychology 155 and permission of instructor. Psychology 101 is not a prerequisite. Mr. Kaplan/Offered periodically

242 PSYCHOLOGY OF LANGUAGE/SEMINAR

A social-psychological, anthropological, and rhetorical consideration of the various functions of language in human behavior. Deals with the ways in which the linguistic system is used as symbolic action in everyday life, poetry, dreams, and social movements. Also examined are various views concerning the relations between language and thought, language and action, language and knowledge, and language and politics. Open to juniors and above. Enrollment limited. Prerequisite for majors: Psychology 155. Psychology 101 is not a prerequisite. Mr. Kaplan/Offered periodically

243 SEMINAR IN PHENOMENOLOGICAL PSYCHOLOGY/SEMINAR

Describes and analyzes personal experience. Each of the readings describes a different aspect of experience. These are then compared with our own experience of our body, our environment, ourself, others, our emotions, actions, and thoughts, and with our imagination and our relationship to reality. Mr. deRivera/Offered periodically

245 DEVELOPMENT IN INFANCY/SEMINAR

Current research on human infants is examined, with emphasis on relations between functioning during this period and later in ontogenesis. A view of the child as an organized adaptive system is emphasized. Topics to be considered include learning, intellectual functioning, social relationships, and the beginnings of language. Some consideration is given to deviations from normal development. Prerequisite: permission of instructor. Ms. Uzgiris/Offered periodically

246 PSYCHOLOGY OF PEACEMAKING/SEMINAR

Examines the psychological dimension that is always present in trying to achieve peace and justice within ourselves, in our interpersonal relationships, and in inter-group relations. Topics include political sociology; the management of aggression; negotiation, mediation, forgiveness, and training for the nonviolent action necessary to achieve justice. Mr. de Rivera/Offered periodically

249 WOMEN IN SOCIETY/SEMINAR

This seminar examines women's psychological functioning and development in broad societal context, with the following aims: to foster a broadly based understanding of the cultural, historical, economic, and institutional factors affecting women's development and functioning; to clarify the interactions between cultural, social and psychological factors; and to enable students to pursue informed discussions and critical thinking on these and related issues. The seminar includes three parts: (1) the societal context, including anthropological and sociological examinions of women's cultural status in various societies, and of economic, historical, and symbolic factors impinging on the individual (language, media, literature, cultural institutions); (2) individual functioning in context, covering such topics as women's personal development, life issues of women, intellectual functioning, and power; (3) women's roles and functions in society, including issues relating to role choices and adult development. Ms. Joffe Falmagne/Offered every year

251 LANGUAGE DEVELOPMENT/SEMINAR

A comprehensive survey of the basic issues and topics involved in the study of language development. The course begins with an examination of the structure of language and the varied uses of language in human activity. Against this background the course turns to the question of how children acquire language, with special emphasis on the contributions of cognitive, social, and language - specific factors in this process. Prerequisite: Permission of instructor. Mr. Bamberg, Ms. Budwig/Offered every year

252 SEMINAR IN AGGRESSION/SEMINAR

The various forms of aggressive behavior are considered from both a theoretical and practical perspective, with strong emphasis on psychological aspects of aggressive behavior. In addition to obvious forms of aggression, including domestic aggression, homicide, war, and gang violence, aggressive aspects in art, music, and sports and the corporate world are considered. Prerequisite: Psychology 101 (Psych 173 helpful but not required); permission. Mr. Rosenbaum/Offered periodically

253 NARRATIVE DISCOURSE/SEMINAR

Relates linguistic, cognitive, and social/cultural factors involved in narrative activities such as telling stories, giving testimonies, route descriptions, etc. Special emphasis is given to the study of narratives from developmental perspectives. Prerequisite: permission of instructor. Mr. Bamberg/Offered periodically

255 PSYCHOLOGY OF AGING/SEMINAR

This course introduces the major concepts in human behavior of elderly people, using the family systems perspective and psychodynamic perspective as complementary frameworks for understanding this phase of the life cycle. In addition to the normal transition in the family system and intrapersonal psychology during late life, the course explores clinical intervention to address family and individual dysfunction caused by the stresses of aging. Sexuality, menopause, grief and loss, Alzheimer's and other dementias, retirement and relocation, and elder abuse are covered. The effects of gender, race and ethnocultural context on the experience of aging are also explored. Prerequisite: permission. Ms. Sassen/Offered every year

256 THE PSYCHOLOGY OF LOVE AND HATE IN LIFE AND LITERATURE/DIALOGICAL LECTURE

An examination, via reading and discussing short stories, as well as critical scrutiny of various theories, of the diverse manifestations of love, hate, and kindred emotions in everyday life. The relations of emotional life to attitudes and actions are considered throughout the life span and in social-collective phenomena, as well as psychopathology. Enrollment limited. Prerequisite: Psychology 155 and permission of instructor. Mr. Kaplan/Offered every other year

257 SEMINAR IN FORENSIC PSYCHOLOGY

The seminar is designed to examine the conflicts which inherently arise between the clinical mental health professions and the criminal justice system. Beginning with contrasting assumptions about human behavior, i.e., determinism versus free will, the course deals with the psychological and legal issues involved in matters such as: the "insanity" defense, the validity of predictions of dangerousness, involuntary commitments to mental hospitals, the right to receive treatment versus the right to refuse it, and the assessments of competence, informed consent, and passive dangerousness. Prerequisite: permission of the instructor. Mr. Grisso/Offered periodically

258 INTERPRETATION OF BEHAVIOR IN EVERYDAY LIFE/SEMINAR

This course focuses on learning to apply general psychological principles to complex, everyday behaviors. Behaviors portrayed in movies, novels, newspaper accounts, etc., are examined. The objective is to help students learn to describe and interpret behaviors in a coherent manner. The assumptions (epistemological, ethical, political and social) that underlie their interpretive framework are emphasized. Mr. Bibace/Offered periodically

259 PSYCHOTHERAPIES/SEMINAR

A variety of methods of curing symptoms, solving problems in living, and promoting personal development are considered through class discussion and illustration and through intensive reading of primary sources. Grade depends on written papers as well as class discussion. Prerequisites: Psychology 172 and permission of instructor. Mr. Cirillo/Offered every year

260 INTERPRETATION OF DREAMS AND OTHER PRODUCTS OF THE IMAGINATION/SEMINAR

Deals with the exposition, application, and critical evaluation of various systems for the interpretation of dreams and other products of the imagination (poetry, art, mythology). Included for examination are the theories of Freud, Jung, Boss (phenomenological), May (existential), and Burke/Kaplan (genetic-dramatism). Problems of validity of interpretation are discussed, and the relation of dream interpretation to the interpretation of other products of the imagination is examined. Open to juniors, seniors, and graduate students. Prerequisite: Psychology 155 and permission of instructor. Psychology 101 is not a prerequisite. Mr. Kaplan/Offered every other year

261 HUMAN NEUROPSYCHOLOGY/LECTURE, DISCUSSION

Approximately ten prominent lecturers review and discuss current research. Topics

include overview of brain organization, brain electrical potentials, cerebral dominance, neuroanatomy and pathology of language, bilingualism, emotion, and psychosurgery.
Year-long course; divisible. Open to advanced undergraduates and graduate students. Ms. Oscar-Berman, Ms. Kaplan/Offered every year

262 COMMUNICATION: VERBAL AND NONVERBAL/SEMINAR

An analysis of the term communication and of the varieties of communication patterns for different populations. Mr. Wiener/Offered periodically

263 FAMILY THEORY AND RESEARCH/SEMINAR

This course explores existing and potential bridges between the fields of classic family theory and therapy and contemporary family research. Major schools of family therapy (psychoanalytic, structural, strategic, family of origin and narrative approaches) are examined, followed by a consideration of major themes and trends in current family research. Special attention is given to gender and couples issues. Participants are expected to research and give class presentations on focal topics of interest. Open to seniors and graduate students. Enrollment limited. Prerequisite: Permission of the instructor. Mr. McHale/Offered periodically

264 THEORY AND RESEARCH IN SOCIAL AND PERSONALITY DEVELOPMENT/SEMINAR

This course will explore theories and research on the socialization and individuation (and their interaction) of the developing infant, child, and adolescent. Contributions of the child, the family, the larger sociocultural context and their interplay will be highlighted. Topics covered include parent-child attachment, temperament, peer relations, pro-social behavior, moral and ego development, and sex-role socialization. Research methods and analysis in developmental research (e.g., modeling growth and change) will be addressed. Ms. Grolnick/Offered periodically

265 CULTURAL IDENTITY AND NATION-STATE/SEMINAR

The course will focus on the construction, replication, acceptance, and rejection of the meaning of one's cultural identity, both historically (in the social sphere) and psychologically (in the individual sphere). In addition to reviewing relevant theoretical constructs, there will be a specific focus on one or more particular cases. Mr. Wertsch/Offered periodically

267 BIOLOGICAL DETERMINISM AND BEHAVIOR/SEMINAR

Beginning with the deterministic conceptions of its participants, this course explores some intellectual history and contemporary data concerning the idea that human behavior is determined by evolutionary history and necessity. Limited to 20 students. Permission. Mr. Thompson/Offered every year

268 COMMUNICATIVE DEVELOPMENT/SEMINAR

Focuses on various approaches to an understanding of human communication from an interdisciplinary perspective. The course explores the relationship between social, cognitive, and linguistic factors in children's communicative development. Prerequisite: permission of instructor. Ms. Budwig/Offered periodically

269 MOTIVATION/SEMINAR

The concept of motivation is examined. Several theoretical models are discussed, including those of psychoanalytic, ethological, and learning theories. Mr. Stevens/Offered periodically

270 ADVANCED TOPICS IN SOCIAL PSYCHOLOGY/SEMINAR

An intensive treatment of selected areas in social psychological research and theory, including consistency theories in attitude formation and in interpersonal perception; attribution theory in self-perception; and social/situational determinants of normal, everyday behavior and of antisocial behaviors such as violence, criminality, and riots. Ordinarily limited to senior majors in psychology or sociology. Prerequisite: permission of instructor. Mr. Laird/Offered periodically

271 THEORIES OF FAMILY PROCESSES/SEMINAR

This course is designed to expose students to the major theories of family processes (e.g., biological, psychodynamic, family life cycle, structural, and behavioral views). Particular emphasis is placed on how the family as a system responds to stress, such as developmental shifts in its members, illness, and psychological disorder. Film and literature portrayals of families are utilized by students to demonstrate their understanding of the various models presented. Prerequisite: permission of instructor. Ms. Azar, Mr. McHale/Offered periodically

272 THE SOCIAL AND SYMBOLIC FOUNDATIONS OF MIND/SEMINAR

Using the work of developmental, social, cognitive and psychoanalytic psychologists, as well as that of philosophers, this course will explore the social and symbolic origins and nature of what is called mind. Some of the topics to be covered include: mind as a social phenomenon and a social process; mind as the employment of symbols; mind as a symbolic representation; learning to refer to mind and self; different modes of symbolic structuring of perception, experience and action. Mr. Bateman/Offered periodically.

273 CRITIQUE OF PSYCHOLOGICAL THEORIES AND APPROACHES TO SOCIAL SCIENCE/SEMINAR

A systematic critique of various current approaches to an understanding of human behavior and the functioning of the human mind. The approaches examined include psychoanalysis, sociobiology, Piagetian theory, cognitive science, and phenomenological psychology. Open to seniors and graduate students. Enrollment limited. Prerequisite: permission of instructor and Psychology 155 for undergraduate psychology majors. Psychology 101 is not a prerequisite. Mr. Kaplan/ Offered periodically

274 DEVELOPMENTAL PSYCHOBIOLOGY/SEMINAR

The biological foundations and correlates of behavioral development are discussed, with emphasis on the perinatal period. Examples are drawn primarily from the animal literature (rodents, birds, infrahuman primates), treating psychobiological development from ethological and ecological perspectives. The neurological and physiological antecedents of human development are discussed where feasible and particularly with reference to developmental disorders. Topics include: neural and hormonal development, plasticity of visual and olfactory development, early learning and memory, development of bird song, parental behavior, early stress, developmental antecedents of sexual and sexually dimorphic behaviors, psychobiological aspects of autism and attention deficit disorder. Open to advanced undergraduate and graduate students. Prerequisite: Permission of the instructor. Mr. Schoenfeld/ Offered periodically

275 LANGUAGES OF INDIVIDUALISM AND COLLECTIVISM/SEMINAR

The course is about psychological and semiotic processes associated with the value systems of various groups, especially as they reflect individualist or collectivist orientations. The course focuses on relationships between forms of discourse and forms of thought. Mr. Wertsch/Offered periodically

276 SYMBOLISM IN EVERYDAY LIFE: MYTH, DREAM, AND SYMBOL/SEMINAR

A close examination of the processes of symbol formation and symbol interpretation in everyday life activities, in social and religious myths, and in dreams and literature. Both cultural and individual manifestations of symbol formation are examined, and various frameworks for the interpretation of symbols are critically discussed. Open to seniors and graduate students. Enrollment limited. Prerequisite: permission of the instructor and Psychology 155 for undergraduate psychology majors. Psychology 101 is not a prerequisite. Mr. Kaplan/Offered periodically

277 THE CREATIVE PROCESS/SEMINAR

A critical examination of a number of attempts, in the humanities and human sciences, to describe and/or explain manifestations of creativity in the arts, sciences, and other domains. Major focus is on the factors presumably constituting the creative act, or inherent in creative functioning. Subsidiary attention is paid to conditions in the cosmos, society, or the personality structure supposedly facilitating or inhibiting creative functioning. Among the theorists considered are philosophers such as Aristotle, Kant, Hegel; critics such as Coleridge, K. Burke, A. Koestler; psychoanalysts of various persuasions and degrees of clarity, such as Freud, Kris, Rybroft, Jung, Neumann, Arieti, et al.; and psychologists from various schools. Enrollment limited. Prerequisite: permission of instructor and Psychology 155 for undergraduate psychology major. Psychology 101 is not a prerequisite. Mr. Kaplan/Offered periodically

278 COGNITIVE DEVELOPMENT FROM INFANCY TO ADOLESCENCE/SEMINAR

Focuses on an examination of selected research studies and theoretical accounts of concept development, memory, reasoning, and communication with special emphasis on Piagetian and Vygotskian perspectives. Prerequisites: permission of instructor. Ms. Uzgiris/Offered periodically

280 DEPTH PSYCHOLOGY, DEVELOPMENTAL THEORY, AND THEORY OF INTERPRETATION/SEMINAR

A critical examination—in light of current views on the nature of interpretation and the nature of signs and symbols—of various conceptions of human development advanced by a variety of thinkers. Although there will be a special emphasis on "depth developmental psychologies" (e.g., Freud, Jung, and their disciples and followers), consideration also is given to the developmental perspectives of Piaget, Werner, and Vygotsky. Focus is on the extent to which conceptions of development, descriptions of development, and "explanations" of development are rooted in tacit commitments of the various theorists to unexamined dogmas as to the nature of reality, the place of mind in nature, the order of values, and the bases for interpretation of signs and symbols. Among the hermeneuticists and semioticians whose work is examined are Cassirer, Gadamer, Ricoeur, Burke, and Culler. Prerequisite: permission of the instructor. Psychology 101 is not a prerequisite. Mr. Kaplan/ Offered periodically

281 SEMINAR IN ANIMAL SOCIAL LIFE/SEMINAR

The day-to-day social life of animals ranging from bees and wasps to birds to monkeys and apes will be investigated. Each year the seminar will focus on one or more topic areas including development, parent-offspring relations, relations among the sexes, territorial defense and aggression and/or others of interest to its participants. Each student will make a class presentation and write a substantial paper which must focus both on fact and theory. Permission of the instructor is required and priority will be given to students who have taken Psychology/Biology 135. Mr. Thompson/Offered periodically

282 SELF AND EMOTION/SEMINAR

This course focuses on the processes by which self-knowledge and self-awareness are developed and maintained. Other topics include the development of self-conceptions, self-consciousness, the understanding and control of one's own actions, self-blame, and the effects of actions on attitudes and feelings. Open to students with strong backgrounds in psychology, by permission only. Mr. Laird/Offered periodically

283 HISTORICAL BACKGROUND OF CONTEMPORARY PSYCHOLOGY/SEMINAR

Includes an appreciation of the generative ideas and world hypotheses underlying contemporary psychological approaches and traces the earlier manifestations of these ideas and world hypotheses in intellectual history or history of ideas. Psychology 101 is not a prerequisite. Permission required. Mr. Kaplan/ Offered every other year

284 PSYCHOLOGY AND RELATED DISCIPLINES/SEMINAR

Deals with the linkages or purported linkages between psychology and literature, psychology and art, psychology and law, psychology and religion, psychology and philosophy, etc. Designed to deal with the two-way relations between various disciplines and psychology and the challenges that these paired disciplines pose for each other. Prerequisites: permission of instructor. Mr. Kaplan/Offered periodically

285 EMOTION AND INTERPERSONAL RELATIONSHIPS/SEMINAR

What are emotions and how do they affect our behavior and our relationships? The course examines a number of theories about different emotions and our relations with others. Prerequisite: permission of the instructor. Mr. deRivera/Offered every other year

286 CROSS-CULTURAL PERSPECTIVES ON HUMAN DEVELOPMENT/SEMINAR

Studies of perception, cognition, social relations, and moral reasoning in contrasting cultural environments, especially during childhood, are examined with a view toward clarifying the role of cultural specificity in the development of human competence. Learning about the cultural diversity of childhood is undertaken to facilitate discussion of several conceptions of the role of cultural context in human functioning. Prerequisite: permission of the instructor. Ms. Uzgiris/Offered every other year

288 LOGICAL COGNITION IN ADULTS AND CHILDREN/SEMINAR

Covers in depth current theoretical developments and empirical findings in the areas of logical reasoning in adults and children, especially in linguistic contexts. The course examines the mental representation of logical knowledge, how logical knowledge interacts with other processes, and the way in which that knowledge may be acquired, especially in relation to language development. The aim of the course is to enable students to continue reading on their own in these areas after this introductory background. Prerequisite: permission of the instructor. Ms. Joffe Falmagne/ Offered periodically

289 MIND IN A SOCIOCULTURAL CONTEXT/SEMINAR

This is a course designed to explore the ways in which historical, cultural, and institutional settings shape and are shaped by psychological processes. The focus is on the comparative analysis since this provides one of the best ways to understand the role of the types of settings of interest. Analyses are made of ways in which theoretical approaches, as well as subjects of studies, reflect sociocultural settings. Special emphasis is given to ideas from the sociocultural approach developed by Vygotsky and other related theorists. Open to seniors. Prerequisite: permission of instructor. Mr. Wertsch/Offered every year

290 MOTIVATION AND SELF-REGULATION/SEMINAR

This course explores the motivation of human behavior, i.e., what energizes and diverts our actions. In the first portion of the course, theoretical and empirical works relevant to motivation, particularly those emphasizing an active organism, will be examined. In the second portion, motivational theories will be applied to various areas including education, work, sports, psychopathology, and psychotherapy. Ms. Grolnick/Offered periodically

291 PURSUIT OF A PSYCHOLOGICAL INQUIRY/WRITING SEMINAR

Designed primarily for upper level transfer students, this course provides an opportunity for them to organize their Clark education around a piece of independent scholarship in the psychological subject of their choice. Each must write a substantial term paper by the end of the semester. Class meetings are used to clarify the exposition of ideas and to train the participants in how to use the resources of the community for independent scholarship. Mr. Thompson/Offered periodically

292 COGNITIVE NEUROSCIENCE/SEMINAR

This course introduces students to the emerging field of cognitive neuroscience. The relationships between cognitive processes and underlying neural mechanisms will be explored. The neural bases of memory, visual integration, motor/response control, attention, and higher cognitive operations will be considered. Models of cognitive processes will be analyzed in neurobiological terms, with emphasis on providing an integration of concepts from the cognitive sciences, physiology, neuroscience, and computer science. Consideration of research approaches in cognitive neuropsychology, computational modeling, neuroimaging, and electrophysiology will be discussed. Staff/Offered periodically

294 NEUROANATOMY AND BEHAVIOR/SEMINAR

A systematic exploration of the organization and function of the human nervous system. Topics include relationships of cortical and subcortical structures of the brain with the spinal cord and peripheral nerves, and the organization of higher brain circuits that form the anatomical bases of movement, perception, emotion, memory, and thought. Clinical examples bridge neuroanatomy with the neurological and neuropsychological disciplines. Prerequisite: Psych 141 or permission of the instructor. Mr. Schoenfeld/Offered periodically

295 NEUROENDOCRINE MECHANISMS OF BEHAVIOR/LECTURE/SEMINAR

A comprehensive examination of how neuroendocrine systems influence mammalian behavior. Initially, anatomical and physiological bases for interaction of the nervous and endocrine systems and the various classes of chemical signaling and major neuroendocrine pathways are reviewed. Neuroendocrine control of behaviors such as feeding, drinking, reproduction, and learning are then discussed with emphasis on how different classes of neuroendocrine signals individually and interactively influence specific behaviors. Application of new approaches to the study of the neuroendocrinology of behavior is included. Prerequisite: Psychology 141. Staff/Offered every year

296 ADVANCED TOPICS IN DEVELOPMENTAL PSYCHOLOGY/SEMINAR STAFF/OFFERED PERIODICALLY

298 SUPERVISED INTERNSHIP IN PSYCHOLOGY/PRACTICUM

Supervised practical experience in a work setting relevant to a topic selected by the student from the subject matter of a psychology course taken previously, with associated bibliographical research. Evaluation principally on basis of term paper integrating relevant literature and practicum observations. Enrollment must be approved by course coordinator in advance of registration. Mr. Bibace/Offered Fall semester and Summer

299 HONORS IN PSYCHOLOGY: SENIOR YEAR/TUTORIAL

Students carry out a research project under the direction of a member of the faculty. Prerequisite: permission of department. Staff/Offered every semester

299 SEC. 1 DIRECTED RESEARCH IN PSYCHOLOGY/TUTORIAL

An independent study for qualified students not in the Honors Program. Prerequisite: permission of instructor. Staff/Offered every semester

299 SEC. 2 DIRECTED READINGS IN PSYCHOLOGY/TUTORIAL

An independent study for qualified students not in the Honors Program. Prerequisite: permission of instructor. Staff/Offered every semester

300 DEVELOPMENTAL PSYCHOLOGY FORUM

Devoted to the presentation and critique of different developmental approaches to the individual and his/her ways of functioning in the world. The approaches considered may include: (1) Piagetian, (2) organismic-developmental, (3) cultural/historical approaches to psychology, (4) Freudian and neo-Freudian, and (5) contrasting nativist or information-processing views. The aim is to acquaint the participants with sympathetic expositions of several points of view and the application of these viewpoints to some selected topic of inquiry. Different topics are discussed in different years. Mr. Bamberg, Ms. Budwig, Mr. Kaplan, Ms. Uzgiris, Mr. Wertsch, and others/ Offered every other year

301 PROBLEM, THEORY, AND METHOD IN PSYCHOLOGY/SEMINAR

During the first semester, each faculty member meets once with the class to discuss his/her perspectives and research. Students prepare brief reports characterizing the links among each faculty member's perspective, research, problems, methods, as well as a paper summarizing or integrating all of the faculty perspectives. Students also submit a brief statement on the status of their own research. During semester two, the ethics of the research process are discussed. Students also formulate proposals for a poster session held at the end of the term. Constructive criticism of these proposals is offered by other members of the seminar. Staff/Offered every semester

302 STATISTICAL METHODS/SEMINAR

The first semester is devoted to a review of the basic concepts of statistics, such as probability, statistical inference, sampling distribution, t-test and regression, and to nonparametric statistics. The second semester introduces analysis of variance and experimental design. Ms. Wiser/Offered every year

303 ADULT ASSESSMENT/SEMINAR

Introduction to intellectual and projective testing with adults (first semester) and measurement in clinical psychology (second semester) Ms. Kellett, Mr. Cirillo/Offered every year

304 CHILD ASSESSMENT/SEMINAR

Devoted to clinical experiences primarily with children. This includes intelligence and projective testing, diagnostic interviewing, and play therapy with children. Mr. Ciottone, Ms. Grolnick /Offered every year

306 QUALITATIVE/INTERPRETIVE METHODS/SEMINAR

This course will give a theoretical overview and practical training in three aspects of what it means to take (and give) an "insider's" perspective. (a) Ethnography - with special emphasis on participant observation; (b) Conversation/Discourse Analysis; (c) Interviewing - with special emphasis on narrative analysis. The three components will be dealt with in the form of exemplary readings, leading to three practical, i.e., empirical, projects. The course will also attempt to cover some basic language categories that are relevant in doing interpretive research. Mr. Bamberg/ Offered periodically

310 THEORIES OF PSYCHOTHERAPY/SEMINAR

The concepts guiding various methods of psychotherapy are considered. Staff/Offered every other year

311 PSYCHOPATHOLOGY/SEMINAR

Theories of psychopathology are examined. Specific phenomena (traditionally called "syndromes") that illustrate general theoretical presuppositions to diagnostic and therapeutic issues in different historical eras are discussed. Ms. Azar/Offered every other year

312 THEORIES OF PERSONALITY/SEMINAR

Various theoretical approaches to personal consistency and individual differences are examined. Staff/Offered every other year

313 CLINICAL DEVELOPMENTAL APPROACH TO PSYCHOPATHOLOGY/SEMINAR

Focuses on the origins and course of behavioral maladaption during the first two decades of life. Problems on assessing and treating psychological disorders are viewed from a developmental perspective, with connections being drawn between normal and abnormal growth processes. In particular, pathological symptomology is related to developmental issues such as early biological regulation, attachment, the family context, peer relations, intellectual development, self-control, sex-role differentiation, and personal efficacy. Selected topics include childhood depression, schizophrenia, eating disorders, borderline states, aggressive and other emotional disturbances, and attentional problems. Mr. McHale/Offered periodically

314 THEORIES OF LANGUAGE DEVELOPMENT/SEMINAR

Beginning with an examination of the structure of language and the varied uses of language in human activity, the course critically examines major theories of how language is acquired by children. Approaches considered may include: (1) nativist, (2) cognitive interactionist, (3) social interactionist, and (4) functionalist. The aim of this seminar is to enable students to integrate current research in the area of language acquisition with developmental theorizing. Mr. Bamberg, Ms. Budwig/Offered periodically

315 IMITATION, INTERNALIZATION, IDENTIFICATION/SEMINAR

Concerned with processes involved in self-other differentiation and the influence of significant others in the construction of self. The writings of J.M. Baldwin, J. Piaget, G.H. Mead, L. Vygotsky, R. Schafer, and others pertaining to these processes are discussed and relevant research evidence is considered. Ms. Uzgiris/Offered every other year

316 SENSORY PROCESSES AND PSYCHOPHYSICS/SEMINAR

Psychophysical concepts and methods are discussed, including magnitude estimation and multidimensional scaling. Particular attention is paid to those concepts and methods relevant to studies of taste, smell, and flavor. Mr. Stevens/Offered periodically

317 BEHAVIOR IN INFANCY/SEMINAR

Proceeds from an examination of the capacities for functioning in the neonate to a consideration of the changes in those capacities during ontogenesis with a view toward understanding the way infants organize their functioning in the world. Different topics are chosen for an in-depth examination in different years. Ms. Uzgiris/Offered every other year

318 PIAGET'S THEORY/SEMINAR

The basic concepts in Piaget's theory of development are critically studied through intensive reading of a selection of his writings. The historical roots of Piaget's concepts as well as their use by him throughout his lifetime are considered. The aim of the course is not familiarization with any particular topic studied by Piaget, but an in-depth examination of some of his theoretical ideas. Ms. Uzgiris/Offered every other year

319 GENETIC-STRUCTURAL APPROACH TO MENTALITY/SEMINAR

Devoted to demonstrating how genetic structural approaches, viz., those of Marx, Freud, Jung, Cassirer, Werner, Piaget, and others, deal with the analysis of mentality as revealed in collective and individual activity. Special emphasis on the categories basic to all genetic structural approaches. Mr. Kaplan/Offered periodically

320 ADVANCED TOPICS IN COMMUNICATION/SEMINAR

Various theories of human communication are critically examined. Special emphasis is placed on theoretical and methodological issues involved in the study of how meaning is established in social interaction. Specific topics vary from year to year depending on participants' current research interests. Ms. Budwig, Mr. Bamberg/Offered periodically

321 TOPICS IN DISCOURSE ANALYSIS/SEMINAR

In the first part of the semester we explore the basic question of how coherence in the monologue (life stories, reports of particular events, route description, etc.) as well as multi-party interactions is achieved. In the second part of the semester we apply some of these issues to ongoing research projects. Mr. Bamberg/Offered periodically

323 THEORY AND RESEARCH IN SOCIAL AND EMOTIONAL DEVELOPMENT/SEMINAR

This course will explore theories and research on the socialization and individuation (and their interaction) of the developing infant, child and adolescent. Contributions of the child, the family, the larger sociocultural context and their interplay will be highlighted. Topics covered include parent-child attachment, temperament, peer relations, pro-social behavior, emotion regulation, moral and ego development, and sex-role socialization. Emphasis will be placed on research methods and analysis in developmental research (e.g., modeling growth and change). Ms. Grolnick/Offered periodically

330 PSYCHOBIOLOGICAL PERSPECTIVES IN PSYCHOLOGY/SEMINAR

A discussion of current issues, problems, and concepts in psychology from the perspective of psychobiology. Students are encouraged to suggest topics of personal interest for discussion within this framework. Possible topics include: biological aspects of mental disorders (schizophrenia, attention deficit disorder, autism, anxiety, depression, etc.), brain lateralization and localization of function, philosophy and psychobiology, the psychobiology of masculinity and femininity, the psychobiology of emotion, the role of the brain in social behavior. Mr. Schoenfeld/Offered periodically

335 SOCIAL EVOLUTION/SEMINAR

An ongoing colloquy on the evolutionary perspective (in the broadest sense) designed for graduate students in psychology, biology, and geography. Each year the participants agree on a conceptual problem they want to explore during the sessions of the seminar. In recent years, sample problems have included the possible significances of sociobiology to contemporary psychology, naturalism in psychology, neo-Lamarkian approaches to evolutionary theory, the concept of levels of analysis, and dialectical approaches to the evolution of a humane society. Interested graduate students should contact the instructor so that topics can be decided and reading materials can be made available. Mr. Thompson/Offered periodically

340 EMOTION AND INTERPERSONAL RELATIONS/SEMINAR

Uses our knowledge of various emotional

transformations (e.g., changes in self-boundary) to develop a precise language for the description of interpersonal phenomena such as merger-separation, dynamics, identification, and the dynamics of family constellations. Mr. deRivera/Offered every other year

341 LOGIC, LANGUAGE, AND MIND/SEMINAR

This seminar examines the relations between logic and mind, and the role of language in logical knowledge, drawing from cognitive, developmental, linguistic and philosophical works. We examine theoretical and empirical work on logical thought; selected alternative logical systems and selected writings in philosophy of logic; various relevant approaches to semantics (including possible world theory and situation semantics); and cognitive and philosophical discussions of issues concerning human rationality. We examine analyses of the relation between logic and language in philosophy and semantics, along with developmental discussions of the relation between language and thought as these inform our more specific questions about language and mind. The seminar is structured so as to be self-contained for students with a general introductory preparation. Ms. Joffe Falmagne/Offered periodically

343 CHEMORECEPTION/SEMINAR

Selected current topics in taste and smell are examined. Mr. Stevens/Offered periodically

357 SYMBOLIZATION AND SYMBOLIC ACTION/SEMINAR

Focuses systematically, and in detail, on one or more of the major approaches to symbolism, symbolization, and symbolic action. The approaches, considered from time to time, include those of Freud and the psychoanalysts; that of Jung and his followers; those of philosophers, such as Ernst Cassirer and Paul Ricoeur; anthropologists such as Victor Turner, Edmund Leach, or Clifford Geertz; literary critics such as Kenneth Burke, Northrop Frye, or Frederic Jameson; semioticians such as Roland Barthes or Umberto Eco; and psychologists such as Werner and Kaplan. On the next occasion, we focus mainly on the seminal writings of Kenneth Burke, examining Burke in the context of these other approaches. Mr. Kaplan/Offered periodically

366 CURRENT TOPICS IN COGNITIVE SCIENCE/SEMINAR

The general questions in this seminar concern the organization of mind and the representation and development of knowledge. Specific topics vary from year to year. Topics include language and mind; concepts and concept acquisition; deductive inference; constraints on induction and cognitive development; theoretical issues in accounting for the acquistion of novel knowledge; situated versus formal theories of knowledge representation. Psychological and philosophical material is discussed, and extensive lists of references are provided for further use. Ms. Joffe Falmagne/Offered periodically

380 PSYCHOTHERAPY PRACTICUM/PRACTICUM

Supervised experiences in psychotherapy. Staff/Offered every year

381 FAMILY THERAPY PRACTICUM/PRACTICUM

Practicum training in family and couple therapy and group parent training. For third year clinical students. Ms. Azar/Offered every semester

382 SEVERE PSYCHOPATHOLOGY PRACTICUM/PRACTICUM

Mr. Bibace/Offered Fall semester

383 BEHAVIOR MODIFICATION PRACTICUM/PRACTICUM

Staff/Offered periodically

384 CONSULTING PRACTICUM/PRACTICUM

Mr. Bibace/Offered Fall semester

385 CHILD/PLAY THERAPY PRACTICUM/PRACTICUM

Ms. Grolnick, Mr. Ciottone/Offered every year

386 NEUROPSYCHOLOGICAL ASSESSMENT/PRACTICUM

An overview of the structure and function of the central nervous system is presented. Emphasis is on quantitative and qualitative analyses of standardized and experimental tests of cognitive functions useful in differential diagnosis of neurological syndromes. Staff/Offered periodically

387 ETHICS IN CLINICAL PSYCHOLOGY/PRACTICUM

For first year clinical students. Staff/Offered every year

388 INTERVIEWING PRACTICUM/PRACTICUM

For first year clinical students Staff/Offered every year

389 CLINICAL WORKSHOP/SEMINAR

For all clinical students in residence. Clinical Staff/Offered every semester

399 SEC. 1 RESEARCH IN PSYCHOLOGY/TUTORIAL

Direction of individual students in their research. Staff/Offered every semester

399 SEC. 2 READINGS IN PSYCHOLOGY/TUTORIAL

A critical analysis of literature in areas related to individual research. Staff/Offered every semester

399 SEC. 9 INTERNSHIP IN PSYCHOLOGY/PRACTICUM

Staff/Offered every semester

Screen Studies

See Department of Visual and Performing Arts

Sociology

■ FACULTY

Robert J.S. Ross, Ph.D., chair, urban studies, political sociology, political economy, social policy

Patricia M. Ewick, Ph.D.: research methods, gender, law, deviance

Bruce London, Ph.D.: technology and society, community, sociology of the Third World, social demography

Deborah M. Merrill, Ph.D.: research methods, family, aging, medical sociology, social demography

Shelly Tenenbaum, Ph.D.: Jewish studies, race/ethnicity, social stratification

■ EMERITI

Ruth H. Jacobs, Ph.D.

Sidney M. Peck, Ph.D.

■ UNDERGRADUATE PROGRAM

The American sociologist C. Wright Mills described the perspective of sociology as the "sociological imagination." He maintained that this point of view enables individuals to see how their personal lives are shaped by larger social forces. In short, Mills argued, we cannot fully understand ourselves without understanding the society in which we live.

At Clark, the study of sociology is committed to developing such an imaginative capacity in students. Through the examination of social processes, such as social stratification, social movements and social change, and through an investigation of diverse social institutions, such as the law, the family, medicine and religion, students acquire the conceptual and analytical tools to enhance both their understanding of their own lives and the world in which they live, and the ability to act with reason and freedom.

As a social science faculty, we are concerned about the human situation and the relevance of our scholarship to societal issues and community problems, as well as to our individual lives. We hope to understand the structure and dynamics of human society, on a small or large scale, so that we and our students as citizens can contribute to improvement of the human condition.

The department major consists of ten courses within the department and five additional related courses in other departments selected from a set of focused options. Students develop their selections through close consultation with a major advisor. Currently, the ten departmental courses are divided as follows:

All majors must complete:

100 Introduction to Sociology or
101 Social Problems (Students may not receive major credit for both 100 and 101)
170 The Social Research Process
210 Sociological Theory: Classical
256 Class, Status, and Power

Majors are strongly advised to take The Social Research Process (SOC 170) and Classical Theory (SOC 210) prior to the senior year. Classical Theory is a prerequisite for Class, Status and Power (SOC 256).

All majors must also complete six additional sociology credits, one of which must be a **capstone.** These credits may be fulfilled through the completion of six regular courses or through a combination of coursework, internships (maximum of two credits), Directed Reading and Directed Research.

Capstone

There are several options available for fulfilling the capstone requirement:

OPTION A, *Directed Research or Readings:* Students may arrange to enroll in a Directed Readings or Directed Research course with any Sociology faculty member. Or majors may transform any upper-level sociology course into a capstone by arranging to complete additional readings or research.

OPTION B, *Internship:* The internship is designed for students who seek supervised field training in community or organizational settings. One or two internship course equivalents may be applied to major requirements.

OPTION C, *Senior Honors* Thesis: This is usually the equivalent of four full courses in sociology; it is designed for selected students who wish to devote approximately 50 percent of their senior years to major research problems.

One of the questions most frequently asked by students is, "What can I do with a degree in Sociology?" Because of the emphasis placed on critical thinking, analytical and communicative skills, and methodological training, students majoring in Sociology are well equipped to enter a variety of occupations, as well as professional careers and graduate school. Sociology majors have gone to law school, medical school, social work occupations, and business school, as well as public policy and urban planning training programs. Many find employment in human services, government and private businesses.

Sociology is a basis for many different careers and graduate schools. Feel free to discuss your postgraduate plans with the faculty. Also, ask the department secretary for a copy of our department's handbook (revised yearly), and for handouts on employment opportunities and careers.

■ COURSES

100 INTRODUCTION TO SOCIOLOGY/VARIABLE FORMAT

A general introductory course in the discipline of sociology, providing students with a broad, general overview of the field, its areas of study, methods of inquiry, and conceptions and analyses of society. The central objective of the course is to encourage students to gain a sociological perspective on human conduct. Staff/Offered every semester

101 SOCIAL PROBLEMS/ VARIABLE FORMAT

This course is designed to give students (1) a sense of the sociological perspective, with its rich tradition of comparative and historical analysis, and (2) an introduction to the theories, concepts, methods, and issues that are explored in greater detail in upper-division courses. These goals are accomplished by examining many of the major social problems facing contemporary societies, such as inequality, poverty, and power; institutional racism and sexism; north-south issues (i.e., development and underdevelopment); environmental deterioration; crime; mental illness; and substance abuse. The mix of problems studied changes from semester to semester. Mr. London, Staff/Offered periodically

110 SOCIOLOGY OF GENDER/ LECTURE, DISCUSSION

An overview of the field of women's studies is offered, focusing on sociological, historical, psychological, and economic dimensions of the female experience. This course explores: biosocial roots of the sexual division of labor, female socialization, education, sexuality, labor force participation, family roles, aging, and the future of feminism. Ms. Ewick, Staff/ Offered every year

170 THE SOCIAL RESEARCH PROCESS/VARIABLE FORMAT

Provides a general introduction to both the qualitative and quantitative methods used in sociological research. Students learn about these methods by using them in projects chosen based on their personal interests. Majors may meet the methods requirement by selecting this course, but the course is also available to nonmajors who want to learn how to investigate social life. Selected studies in various methods are assigned reading. Ms. Ewick, Ms. Merrill, Staff/Offered every semester

200 DIRECTED READINGS IN SOCIOLOGY

Offered for variable credit. Staff/Offered every semester

203 AMERICAN JEWISH LIFE/VARIABLE FORMAT

The primary objective of this course is to provide students with an introduction to the social scientific study of American Jewry. A broad range of topics is covered, including: immigration, economic mobility, intermarriage, Jewish feminism, American Judaism, ethnic identity, anti-Semitism, and political behavior. Throughout the semester, comparisons between Jews and other groups are highlighted. (Formerly Sociology of Jewish Americans) Ms. Tenenbaum/Offered every other year

204 THE HOLOCAUST: A STUDY OF GENOCIDE/VARIABLE FORMAT

Students gain an understanding of the origins and history of the Holocaust from this course. Important topics to be analyzed are: the roots of Nazi anti-Semitism, the implementation of the "Final Solution," and acts of resistance. Throughout the course, moral issues raised by the study of the Holocaust are confronted. Ms. Tenenbaum/Offered every year

205 SOCIOLOGY OF THE ENVIRONMENT/LECTURE, DISCUSSION

An introduction to environmental sociology, a newly emerging area of interest in the discipline. Focus is placed on the reciprocal relationships between society and the environment. The theoretical perspectives of human ecology and political economy are used to illuminate topics such as: population, technology, and environmental degradation; the environmental movement; north-south environmental conflicts; and food and hunger. Mr. London/Offered every year

210 SOCIOLOGICAL THEORY: CLASSICAL/VARIABLE FORMAT

Beginning with European writings of the late eighteenth century and extending to early American writings in the first decades of the twentieth century, this course focuses on central themes and problems addressed by a wide variety of social philosophers and sociologists. Emphasis is placed on grand theoretical models of society, conceptions of order, structure and change; and the social construction of the individual. This course presents a survey of major theorists from a critical and comparative perspective. The traditional corpus of nineteenth-century theory (Marx, Durkheim, and Weber) is discussed, though the course also seeks to address less traditional works (including those in utilitarianism, feminism, Afrocentrism, and human ecology). Meets social theory requirement for majors. Staff/ Offered every semester

211 SOCIOLOGICAL THEORY: CONTEMPORARY/VARIABLE FORMAT

Social developments in the United States during the post-World War II epoch have given rise to a variety of theoretical views in the field of sociology. Diversity of approach and fragmentation of theoretical stance are related to significant changes in social structure and political economy of the United States during the past four decades. The relationship between social theory and political ideology is considered throughout. Staff/ Offered periodically

232 SOCIAL DEMOGRAPHY/ VARIABLE FORMAT

Demography is the statistical description and analysis of human populations, including birth, death, and migration rates; age and sex structures; and characteristics such as marital status, occupation, religion, and race. Social Demography focuses on relationships between and among (a) social, cultural, political, and economic forces, and (b) population structures, processes, and characteristics. Consideration of demographic factors contributes to our understanding of social issues, such as the aging of the population, the changing status of women, rapid world urbanization, Third World economic problems, food production shortages, and environmental pollution. Mr. London, Ms. Merrill/Offered periodically

235 SOCIOLOGY OF TECHNOLOGY/ LECTURE, DISCUSSION

Analyzes the implications of technological change for society and the effect of social processes and technological development. Some of the specific topics discussed are: the differing utopian, dystopian, and Marxist views of technology and society; the relationship between technology and the environment; the notion of "the imperatives of technology" and the rise of corporate capitalism; and computers and society. Mr. London, Staff/Offered periodically

239 AGING AND SOCIETY/ LECTURE, DISCUSSION

The process of aging, and older people in our society are the focus of this course. Specific attention is devoted to the diversity of the aged in the United States. The impact of social structure on the aged requires examination of key issues confronting the elderly, such as employment, retirement, income, housing, and health care needs. "Successful aging" is emphasized. (Formerly Social Gerontology) Ms. Merrill, Staff/Offered every year.

241 SOCIOLOGY OF MEDICINE/ VARIABLE FORMAT

Examines the role of health care professionals and the health care industry, as well as health and illness as social phenomena. Topics to be covered include: social causes of disease, theories of individual response to illness, and the sociology of institutions that attempt to care for and cure the sick. The course also addresses problems in the health care system at the national level and reviews potential solutions to the mounting "crisis" in the provision of health services. This course is designed to be useful to students with general interests, and to those considering health-related careers. Ms. Merrill, Staff/Offered every year

243 POLITICAL SOCIOLOGY/ VARIABLE FORMAT

Structures of social class and power are examined in relationship to stability, conflict, and change in government. This course focuses on government relationships to businesses, the economy, and other political interests and behavior, and compares the United States with other industrial countries. Mr. Ross/ Offered every year

244 THE COMMUNITY/LECTURE, DISCUSSION

An analysis of one of the most general and enduring ideas at the heart of the discipline of sociology: the idea of community. How do we define "community"? What is the meaning of community for individuals and groups? How has the nature of community changed over time? And what are the central concepts, issues, theories, and methods used by sociologists in both the general study of community and the writing of community studies? Mr. London/Offered every year

246 SOCIAL PLANNING AND SOCIAL POLICY/ VARIABLE FORMAT

Introduces the field of social policy. Each semester focuses on a specific theme. Past themes include: poverty, urban planning and social policy, community planning, and social consequences of industrial change. Mr. Ross/Offered every other year

247 CITIES AND SUBURBS/ VARIABLE FORMAT

Introduces urban sociology. Examines the structure and development of American metropolitan areas and community power, with special attention to changing functions of cities and suburbs. Examines different ways of life in cities and suburbs. Mr. Ross/Offered every year

248 SEMINAR IN GLOBAL CAPITALISM

Processes of economic and social development are examined in two regional frameworks: changes in the structure of industrial regions of the advanced capitalist countries, and changes in the structure of developing and more peripheral regions. The conceptual framework is that of a global capitalist system undergoing significant transformation in the deployment of labor and capital. Mr. Ross/Offered every year

249 THE SOCIOLOGY OF DEVELOPMENT AND UNDERDEVELOPMENT/LECTURE, DISCUSSION

This course examines and analyzes the transformation of post-colonial, "Third World" societies undergoing capitalist or socialist development. It discusses theories of development in their social, economic, and demographic context. It also explores the international division of labor, labor migration, urbanization, and social racial stratification. Mr. London, Staff/Offered every other year

250 CRIMINOLOGY/ VARIABLE FORMAT

Criminology reviews the nature of crime in society, theories about victims of crime, theories about why people commit illegal acts, and the types of crime that occur in American society. Staff/Offered periodically

251 MEDIA AND SOCIETY

Analyzes the history and development of the modern media of mass communications and explores key issues in the sociological analysis of popular culture. A variety of theoretical and methodological approaches to the sociology of mass communications is presented. Staff/Offered periodically

252 RACE AND AMERICAN SOCIETY

This course focuses on the political, economic, and social lives of Native Americans, Latinos, African Americans, and Asian Americans. Topics discussed include racism, the Civil Rights Movement, gender, class, popular culture, and public policies. A central assumption of this course is that we must turn to the historical experience to understand contemporary race relations. Ms. Tenenbaum/ Offered every year

255 THE FAMILY/ VARIABLE FORMAT

This course examines the assumed collapse of the American family and the causes of this collapse. Also considered are challenges to the new family, such as dual-career couples and the resulting division of labor in the home. Working class, African American, and homeless families are also discussed. Ms. Merrill/Offered every year

256 CLASS, STATUS, AND POWER/VARIABLE FORMAT

An analysis of the nature and dynamics of social stratification in contemporary society is presented. The economic and political power of the upper class, social mobility, the process of deindustrialization, feminization of poverty, and the intersection of race and class are studied. Ms. Tenenbaum, Mr. Ross/Offered every semester

257 CITIES IN GLOBAL PERSPECTIVE/VARIABLE FORMAT

This course is based on four dimensions of comparison: historical; cross-national within advanced capitalism; the cross-system of social relations (i.e., capitalist urbanization compared with socialist urbanization); and a contrast between the processes and structures of urbanization in the First and Third Worlds. Mr. Ross/Offered periodically

258 WOMEN IN JEWISH CULTURE

The goal of this course is to uncover the experiences of Jewish women, using gender analysis to enrich our understanding of Jewish life. Critical questions about the status of women in texts, rituals, and communal practices from the biblical period to the present will be raised. Ms. Tenenbaum/Offered every other year

259 SOCIOLOGY OF ORGANIZATIONS/LECTURE, DISCUSSION

This course examines the theory and practice of organizations from a sociological perspective. Through lecture, directed readings, research, and discussion, students examine major concepts in the historical development of modern organizations (e.g., bureaucracy) and apply their learning to the investigation of selected contemporary problems and issues of complex organizations. Ms. Ewick/Offered every year

260 FAMILY ISSUES IN AN AGING SOCIETY/LECTURE, DISCUSSION

How the aging of our society has affected family life for both elders and younger generations is examined. Particular attention is paid to the topic of family caregiving. A life-course perspective is emphasized and attention is given to the impact of mid-life family events on later life relationships. Ms. Merrill/Offered every other year

262 SOCIOLOGY OF LAW/ VARIABLE FORMAT

The relationship between law and other aspects of social life—specifically, stratification, morphology, organization and culture—is examined. This course compares law with other methods of social control, and analyzes the three functions of law: deterrence, conflict resolution, and social engineering. Special attention is directed to the comparison of law and custom. Using both historical and cross-cultural materials, the course examines the validity of such issues as legal evolution and equality under the law. The theoretical works of Marx, Durkheim, and Weber are used to analyze the nature of law as either a dynamic or static process in society. Ms. Ewick/Offered periodically

263 DEVIANCE/VARIABLE FORMAT

This course has two fundamental objectives: (1) to introduce the student to the literature, research, and conceptual problems in the field of deviance and (2) to examine conceptual frameworks out of which contemporary definitions of deviance emerge. Ms. Ewick/Offered every year

265 SOCIAL MOVEMENTS/ VARIABLE FORMAT

The general characteristics of modern social movements are discussed, with modern American movements (feminist, civil rights, etc.) used as examples. Problems of recruitment, organization, and ideology are analyzed. The form of the course depends on the number of students registering. Mr. Ross, Staff/Offered every year

275 RELIGION AND SOCIETY/ VARIABLE FORMAT

The interaction between religion and contemporary society (particularly in the United States) is characterized by conflict and controversy concerning the unique relationship between religious organizations and "the State." This course analyzes the effect of religious organizations on the culture, structure, and the policies of contemporary society by exploring, historically and cross-culturally, the influence of religion on social existence. Staff/ Offered periodically

285 SPECIAL TOPICS IN PEACE STUDIES

Refer to Peace Studies 285 Staff/Offered periodically

297 TOPICS IN SOCIOLOGICAL THEORY/VARIABLE FORMAT

This course is for students who have already taken classical or contemporary theory, and for students who want to make an in-depth study of a particular theorist but have not yet made such a study. Mr. Ross, Staff/Offered periodically

298 THESIS STUDIES

Independent study submitted for honors consideration for senior sociology majors. Students should sign up with the faculty member whose areas of interests are most suited to their own. The emphasis is on independent research undertaken with faculty guidance and supervision. Generally requires two credits in each semester of the student's senior year and culminates in a thesis submitted for honors consideration. Staff/Offered every year

299 SEC. 9 INTERNSHIPS IN SOCIOLOGY

Supervised field training in community and organized settings is available. This is the equivalent of one to four full courses in sociology. Variable credit. Staff/Offered every semester.

Theater Arts

See Department of Visual and Performing Arts

Visual and Performing Arts

■ VISUAL AND PERFORMING ARTS

Gerald R. Castonguay, Ph.D., chair: musicology

Clark's Department of Visual and Performing Arts is composed of individual academic programs in art history, studio art, music, screen studies, and theater arts. Whether students prefer to study the history, criticism, philosophy, and theory of the arts or to engage in the creative activity of studio work, composition, or performance, there are courses, concentrations, minors, specializations, and majors available. A major in a given area can be the core for a preprofessional program; or, the student may cross traditional disciplinary lines—by double majoring, for instance, or by individually designing a major or combined major that includes two or more areas of study. In consultation with the appropriate program director, students who have an interest in the arts but decide to major in other areas may develop a four or five course sequence as a minor or an area of specialization. Specific major requirements for the different programs and their course descriptions are listed below under each program heading. Majors and nonmajors are welcome to participate in the department's programs and courses and to attend its many art exhibitions, film presentations, and musical, theatrical, and dance performances.

The Department of Visual and Performing Arts is part of the Higgins School of Humanities.

Art

Because art reflects the trend of thought and the impact of events of its time, it relates to many other areas of study—history, philosophy, and psychology, to name just a few. Study of art thus enhances one's understanding and appreciation of other disciplines. For students interested in the arts, humanities, or social and natural sciences, the study of art can provide both majors and nonmajors with an especially rewarding and enriching part of liberal arts education. Courses and programs in art offer opportunities to develop critical skills, acquire resources for visual thinking and communication, and engage in personal creative expression. And for both future art scholars and professionals, Clark's art programs provide a solid foundation that will serve them well in their graduate studies or careers.

For information concerning majors and courses, see the art history and studio art program entries below.

■ ART HISTORY AND CRITICISM

PROGRAM FACULTY

Bonnie L. Grad, Ph.D.: Modern art

Catherine Levesque, Ph.D., program director: Renaissance and Baroque art

Rhys F. Townsend, Ph.D.: Ancient art and Archaeology

■ PART-TIME FACULTY

Jean Borgatti, Ph.D.: African, Native American, and Oceanic art

■ ADJUNCT FACULTY

Paul Burke, Ph.D.

John Conron, Ph.D.

■ EMERITUS

Samuel P. Cowardin III, Ph.D.: Renaissance, Oriental art

■ UNDERGRADUATE PROGRAM

The art history major offers a focus within the liberal arts for students interested in the visual arts and the social, cultural, and historical context in which art is created. Majors may specialize in ancient, Renaissance and Baroque, and modern art history, or other areas of special interest. For those seriously considering teaching, museum and gallery work, arts conservation, or arts management, the major provides a solid foundation for graduate study.

■ THE ART HISTORY MAJOR

A total of sixteen courses are required for the major, ten of which are art history courses.

■ REQUIREMENTS:

1. Art History Courses

a. 010 and 011: Introduction to the History of Art (or equivalent courses or superior advanced placement performance)

b. Four courses specializing in a single area (e.g., Ancient, Renaissance/Baroque, Modern). Two of these courses must be at the 200 level, including 290, Senior Thesis in Art History

c. Four courses outside the area of specialization, one of which must be at the 200 level.

2. Related Courses

Four courses at the 100 level or above outside the visual arts but related to the student's area of specialization (e.g., appropriate language courses, or courses in history, literature, music, etc.) and selected on the basis of consultation with the student's advisor

3. Studio Courses

Any two courses in Studio Art

■ DOUBLE AND COMBINED MAJORS

Because the study of art history lends itself to interdisciplinary approaches, students may wish to double major in art history and another discipline. In such cases, students may eliminate one course from the required items 1 b and c; two courses from item 2; and one course from item 3, reducing the total number of courses required for the art history major to eleven.

Requirements:

1. Art History Courses

a. 010 and 011: Introduction to the History of Art (or equivalent courses or superior advanced placement performance)

b. Three courses specializing in a single area (e.g., Ancient, Renaissance/Baroque, Modern). Two of these courses must be at the 200 level, including 290, Senior Thesis in Art History

c. Three courses outside the area of specialization, one of which must be at the 200 level.

2. Related Courses

Two courses at the 100 level or above outside the visual arts but related to the student's area of specialization (e.g., appropriate language courses, or courses in history, literature, music, etc.) and selected on the basis of consultation with the student's advisor

3. Studio Courses

Any one course in Studio Art

A combined major in art history and studio art, requiring a minimum of eight art history courses, may be developed in consultation with the art history and studio art program directors.

HONORS IN ART HISTORY

The sixteen courses required for the art history major, including the senior honors thesis (299, section 8) are required for the Honors Program in Art History. The honors student will register for 299, section 8, Honors in Art History, rather than 290, Senior Thesis in Art History. Students who wish to take Honors in Art History should identify an area of interest, choose an appropriate honors advisor, and apply for eligibility to the Art History faculty before the end of the junior year. See the course description under Art History 299, section 8, Honors in Art History, for details.

NONMAJORS

All courses and seminars in the art history program are open to qualified nonmajors. Students whose major lies in another discipline can declare a minor in art history. Six courses are required for the art history minor.

THE ART HISTORY MINOR

Requirements:

1. 010 and 011: Introduction to the History of Art
2. Four additional courses, no more than two of which may be in one area of specialization (i.e., Ancient, Renaissance/Baroque, Modern) and at least one of which must be at the 200 level.

COURSE NUMBERS AND LEVELS

000-099	*Introductory courses*
105-119	*Survey courses in Ancient art*
120-139	*Survey courses in Renaissance and Baroque art*
140-149	*Survey courses in Modern and Contemporary art*
150 +	*Survey courses in non-Western art and special approaches to the study of art*
205-219	*Intermediate and advanced courses and seminars in Ancient art*
220-239	*Intermediate and advanced courses and seminars in Renaissance and Baroque art*
240-250	*Intermediate and advanced courses and seminars in Modern art*

COURSES

010 INTRODUCTION TO THE HISTORY OF ART I/LECTURE, DISCUSSION

Through the study of architecture, sculpture, and painting, the course seeks to broaden artistic experience and to create more perceptive viewers of the visual world in which we live. Taught jointly by several faculty members, it also introduces students to the program in art history. The course looks at art as aesthetic form, as language and communication, and as voice of complex and diverse societies. Part I concentrates on the ancient, medieval, and early Renaissance periods of western art, using them as a basis from which to consider the art of other time and places, both western and non-western. Staff/Offered every year

011 INTRODUCTION TO THE HISTORY OF ART II/LECTURE, DISCUSSION

Through the study of architecture, sculpture, and painting, the course seeks to broaden artistic experience and to create more perceptive viewers of the visual world in which we live. Taught jointly by several faculty members, it also introduces students to the program in art history. The course looks at art as aesthetic form, as language and communication, as voice of national and international culturalism. Part II concentrates on the later Renaissance, Baroque, and modern periods of western art, using them as a basis from which to compare art of other times and places, both western and non-western. Staff/Offered every year

105 THE AEGEAN WORLD/LECTURE, DISCUSSION

An introductory survey of architecture, sculpture, and painting in Egypt, Mesopotamia, and the Aegean during the Bronze Age, the course covers the Old and New Kingdoms of Egypt; the great dynasties of Sumer, Akkad, and Babylon; and the cultures of the Aegean islands, Crete, and mainland Greece. Examines and compares artistic forms and traditions of each region in order to shed light on the individual religious and social contexts in which they evolved and to reveal the differing conditions under which these civilizations emerged. Highlights the renowned archaeologists whose discoveries have illuminated the history and artifacts of these lands. Includes field trips to area museums. Mr. Townsend/ Offered every other year

106 INTRODUCTION TO ARCHAEOLOGY/LECTURE, DISCUSSION

Concentrating on the Mediterranean region, the course traces the history and methods of archaeology—emphasizing its unique combination of the sciences and the humanities—from its faltering but enthusiastic first steps to its technologically advanced state today. Selected case studies, which involve the student's active participation, will demonstrate how archaeology has illuminated the ancient world. Of special concern will be the newly developed field of underwater archaeology, which has contributed so much to our understanding of the history of seafaring. Mr. Townsend/Offered every other year

109 CLASSICAL MYTH AND THE GREEK IDEAL/LECTURE, DISCUSSION

Investigates a select number of classical myths and the concept of the "Greek ideal" as expressed in art, both in classical Greece and Rome and in various later periods, including the twentieth century. We approach the myths from the standpoint of origin and significance, changing modes of representation, and manipulation for political purposes. The concept of the Greek ideal is also examined both as it originally developed and as it was conceived in subsequent ages. Throughout, the changing attitudes towards the classical world and the significance of the classical tradition in art and history are emphasized. Includes field trips to area museums. Mr. Townsend/Offered every other year

110 ANCIENT GREEK ART/ LECTURE, DISCUSSION

This intensive survey extends chronologically from the Dark Ages following the collapse of the Minoan-Mycenaean world in the twelfth century B.C. to the close of the Hellenistic period in the first century B.C.; geographically, it reaches from Greece itself westward to the Greek cities of South Italy and Sicily, and eastward to the Hellenized lands of Asia Minor, Egypt, and the Near East. Within this context, discussion includes the concept of artistic originality and stylistic development, the relationship between art and politics, and the contribution of Greek art to the subsequent history of the visual arts in the Western world. Field trips to the Worcester Art Museum and the Museum of Fine Arts in Boston are included. Mr. Townsend/Offered every other year

111 ROMAN ART AND ARCHITECTURE/LECTURE, DISCUSSION

Refer to course description under Classics 111. Staff/Offered every other year

114 ANCIENT CITIES AND SANCTUARIES/LECTURE, DISCUSSION

An introduction to the great urban and religious centers of the ancient world. The course examines the concept of the city as it first evolved in the Near East and as it developed in classical Greece and Rome. Emphasis is placed both on the design and structure of urban spaces and on the factors affecting town planning. We discuss the famous ancient sanctuaries not only as areas of religious worship, but also as centers of cultural activity involving theater, art, athletics, and politics. Throughout, both cities and sanctuaries are viewed in their historical setting as part of the larger civilizations which nurtured them. Mr. Townsend/Offered every other year

120 THE HISTORY OF PRINTS/ LECTURE, DISCUSSION

An introduction to the development of printmaking in Europe from the fifteenth through the twentieth centuries. The aim of the course is to familiarize the student with the most important graphic techniques and at the same time, to explore evolving attitudes toward prints and printmaking. Ms. Levesque/ Offered every other year

124 NORTHERN RENAISSANCE ART/LECTURE, DISCUSSION

An examination of Northern European art—particularly in the Netherlands—during the fifteenth and sixteenth centuries. Particular attention is given to the major innovators of the period: Jan van Eyck, Rogier van der Weyden, Hugo van der Goes, Jerome Bosch, Albrecht Dürer, and Pieter Bruegel. Their work, and that of other artists, is studied in the context of contemporaneous cultural, social, and religious values. Ms. Levesque/ Offered every other year

125 ITALIAN RENAISSANCE ART/LECTURE, DISCUSSION

This course examines the development of the Renaissance in Italy during the fifteenth and sixteenth centuries. Concentration on three centers—Florence, Rome, and Venice—places the achievements of individual innovators within a particular cultural context. Ms. Levesque/Offered every other year

131 BAROQUE ART/ LECTURE, DISCUSSION

The close study of several seventeenth century artists, including Caravaggio, Bernini, Rubens, Rembrandt, Velazquez, and Poussin. Particular consideration is given to how each of these artists expresses the naturalism, psychological acuity, and religious sensibility that are generally viewed as characteristic of Baroque art. Ms. Levesque/Offered every other year

134 SEVENTEENTH-CENTURY DUTCH PAINTING/LECTURE, DISCUSSION

An introduction to Dutch Painting of the seventeenth century. Works by Frans Hals, Rembrandt, Jan Vermeer, Jan Steen, Jacob Ruisdael, and other artists are viewed as part of a wider artistic and cultural context. Throughout the course, emphasis is placed on the relationship between naturalism of representation and the contemporaneous language of symbols. Ms. Levesque/Offered every other year

140 MODERN ART: NINETEENTH CENTURY/LECTURE, DISCUSSION

This course is a survey of the revolutionary movements in European art including Neoclassicism, Romanticism, Realism, and Impressionism. We examine the formal characteristics of these styles and the cultural and social context from which they emerged. In particular, we study the development of landscape painting in England and France, and the origins of an "avant-garde." Ms. Grad/ Offered every other year

141 IMPRESSIONISM/ LECTURE, DISCUSSION

This course traces the development of Impressionism over three decades: from the early works of Manet to the last Impressionist Exhibition in 1886. We examine in great depth both the stylistic development of individual artists—Manet, Monet, Renoir, Degas, Cezanne, Cassatt, Morisot, and Pisarro—and the cross-fertilization of ideas between and amongst these artists. In addition, we study the highly finished academic paintings of the Jonas and Susan Clark Collection to illustrate what kind of art the Impressionists were reacting against as well as the kind of art that was widely popular at the time Impressionism failed to win critical acceptance. Finally, we consider the social and cultural context from which urban and rural impressionism emerged. Ms. Grad/Offered every other year

142 MODERNISM/LECTURE, DISCUSSION

This course begins where Impressionism ends—in 1886, the year in which the twentieth century is said, by some, to have arrived. After a brief survey of Post Impressionism, we trace the blossoming of the modern imagination as it developed in the modern movements of Fauvism, Cubism, German Expressionism, Suprematism, Constructivism, and Surrealism. Ms. Grad/Offered every other year

143 ART FROM 1945 TO 1965/ LECTURE, DISCUSSION

A survey of the major movements of contemporary American and European art, including abstract expressionism, environments and happenings, pop art, minimalism, earth art, and the new realism. We explore the increasing importance of the commercial environment, popular culture, and technology as a major theme in the art of the sixties. Ms. Grad/Offered every other year

144 MODERN LANDSCAPE ART: 1750-1970/LECTURE, DISCUSSION

This course traces the development of landscape painting in Europe and America from 1750 through the recent past, focusing on both the stylistic development of this art form and the cultural and social context in which it originated and flourished. We examine historical and social factors including urbanization and the birth of modern town planning, sanitation, water supply and park design; industrialization and technology; the rise of tourism; and the "commercialization" of the landscape. Emphasis is on the role of landscape in the development of twentieth-century painting. Ms. Grad/Offered periodically

145 THE ART OF TODAY: 1960 TO THE PRESENT/LECTURE, DISCUSSION

This course examines the evolution of the current art scene and the work of today's artists. We will address styles beginning with pop and move on to minimalism, conceptual art, performance art, earth works and environments, video art, installation art, neo-expressionism, and new-image painting. Students are encouraged to analyze the critical themes represented in the shift from modernism to a postmodern aesthetic with emphasis on the changing role of the artist, expectations for the audience, and the nature of the art object itself. Teaching methods include slide lecture, group discussion, video and film presentations, and visits to museum and gallery exhibitions. 143, Art From 1945 to 1965, is recommended but not required. Staff/Offered periodically

155 ART OF AFRICA, OCEANIA, AND NATIVE AMERICA/LECTURE, DISCUSSION

Focusing on the art of the Yoruba of Southern Nigeria, the Northwest Coast Native Americans, and selected cultures of New Guinea, this course aims to develop in the student an appreciation for the art forms, cultural settings, and distinctive aesthetic in non-Western culture. Where possible, students will be expected to make aesthetic and stylistic judgments concerning original material. Ms. Borgatti/Offered every year

156 ARTS OF BLACK AFRICA/ LECTURE, DISCUSSION

An introduction to the major traditions of art in the western Sudan and Guinea coast, the Niger delta and equatorial forest, the southern savanna, and southern and eastern African fringe. Emphasis rests on formal, conceptual, and historical links between the cultures and art forms considered. Ms. Borgatti/Offered every year

157 THE ARTS OF NORTH AMERICAN NATIVE PEOPLES/ LECTURE, DISCUSSION

The course will examine the arts of the Native Peoples of North America, i.e., the arts of Woodland, Southeastern U.S., Plains, Pueblo, Navajo, California, and Northwest Coast Indian groups as well as the arts of Alaskan and Canadian Eskimos. Emphasis will be on the traditions as we know them from the contact period (1500-1900). The approach will combine appreciation of form with understanding cultural context. Pre-contact traditions as we know them from the archaeological record and contemporary developments in the arts of Native Peoples will also be considered. Ms. Borgatti/Offered other year

181 ART AS ARTIFACT/SEMINAR

An intensive study of individual works of painting and sculpture that emphasizes the contribution of media, technique, and context to meaning. Some consideration is given to questions of connoisseurship (attribution and condition) insofar as these factors influence what we see. A number of classes are held at the Worcester Art Museum. Ms. Levesque/ Offered every year

183 ART CRITICISM/LECTURE, DISCUSSION

This course surveys the writings of the major American and English art critics active from 1945 to the present. Through these writings of major critics, the student becomes familiar with a variety of methodologies and viewpoints, including formalism, neoconservatism, Marxism, and feminism. Critics include Clement Greenberg, Harold Rosenberg, Hilton Kramer, Dore Ashton, Lawrence Alloway, Rosalind Krauss, Donald Kuspit, Lucy Lippard, and John Berger, among others. (Readings vary from year to year.) Several field trips to Boston area galleries occur throughout the semester. Writing intensive. 143, Art From 1945 to 1965, is recommended but not required. Ms. Grad/Offered every other year

184 ART IN CULTURE: THE PAINTINGS OF GEORGIA O'KEEFFE/LECTURE, DISCUSSION

In this interdisciplinary and introductory course we examine broad cultural and geographic issues through the focus on the work of Georgia O'Keeffe. Like many twentieth-century modernists, she turned away from the technological urban world to search for elemental landscapes. These she found in New Mexico. From her experiences of the south-western desert and the rituals of Hispanic and Native American cultures, she forged a spiritual art with moral import that was unique in its time. Readings from various disciplines include Thoreau, Emerson, Paul Tillich, Willa Cather, Mabel Dodge Luhan, Ruth Benedict, and Mircea Eliade. Ms. Grad/Offered every year

215 THE TEMPLE BUILDERS: ARCHITECTURE IN ANCIENT GREECE/ LECTURE, DISCUSSION

Traces the evolution of monumental architecture in Greece from its origins in the Geometric period through its development in Archaic, Classical, and Hellenistic times. Emphasis is on the integration of craftsmanship, or techne, with elements of design in the Doric, Ionic, and Corinthian orders. Discussion includes the relationship between architect and patron, the social role of architecture, and its political impact. In addition, students will become familiar with questions and problems of modern investigation and reconstruction of ancient buildings. Mr. Townsend/Offered periodically

219 SPECIAL TOPICS: ANCIENT ART/SEMINAR

This seminar introduces students to specific issues and approaches in the study of ancient art. Topics vary each time the seminar is taught. The course develops the student's research, oral presentation, and writing skills through intensive study that is not possible in the context of a survey course. While the seminar is specifically designed for majors, qualified students from other disciplines are most welcome. Course may be taken for credit more than once. Mr. Townsend/Offered periodically

239 SPECIAL TOPICS: RENAISSANCE AND BAROQUE ART/SEMINAR

This seminar introduces students to specific issues and approaches in the study of Renaissance and Baroque art. Topics vary each time the seminar is taught. The course develops the student's research, oral presentation, and writing skills through intensive study that is not possible in the context of a survey course. While the seminar is specifically designed for majors, qualified students from other disciplines are welcome. Course may be taken for credit more than once. Ms. Levesque/Offered periodically

248 WOMEN AND ART/SEMINAR

This course explores both the history of women artists and the circumscribed nature of their professional involvement in the art institutions of their day. It also explores specific topics and questions: women as subjects in art; femininity and masculinity as cultural constructs; the concept of "genius" as myth; and the nature of objectivity. Readings include Linda Nochlin, Thalia Gouma-Peterson, Lucy Lippard, Rozsika Parker and Griselda Pollack, and John Berger. Ms. Grad/ Offered every other year

249 SPECIAL TOPICS: MODERN ART/SEMINAR

This seminar introduces students to specific issues and approaches in the study of modern art. Topics vary each time the seminar is taught. The course develops the student's research, oral presentation, and writing skills through intensive study that is not possible in the context of a survey course. While the seminar is specifically designed for majors, qualified students from other disciplines are welcome. Course may be taken for credit more than once. Ms. Grad/Offered periodically

250 THE JONAS AND SUSAN CLARK COLLECTION/SEMINAR

This is an upper-level multidisciplinary course which examines in detail the American landscape and European genre paintings of this small collection. The course considers the historical context in which the collection was formed, with special emphasis on the Clarks' interest in paintings of women, nature, and oriental scenes. Course may be taken for credit more than once. Ms. Grad/Offered every other year

290 SENIOR THESIS IN ART HISTORY/SEMINAR

Required of all art history majors and overseen by one of the program faculty, this seminar is taken during the last semester of the senior year while students write their thesis under the direction of their individual advisor. The course provides students a forum for facilitating and sharing their thesis research. It also examines a range of issues in art history, including the changing nature of the discipline, approaches to research and genres of scholarship, and careers in and related to the field.Staff/Offered every year

■ SPECIAL OFFERINGS

299 SEC. 1 DIRECTED READING

Staff

299 SEC. 2 DIRECTED RESEARCH

Staff

299 SEC.3 DIRECTED WRITING

Staff

299 SEC.4 FIELD PROJECT

Staff

299 SEC.5 SPECIAL PROJECT

Staff

299 SEC.6 SPECIAL TOPICS

Staff

299 SEC.8 HONORS IN ART HISTORY: SENIOR YEAR

Students planning to take honors in Art History should identify an area of interest, select an appropriate advisor, and apply for eligibility to the Art History faculty before the end of the junior year. The honors thesis is a yearlong project, for which the student will take 299.1, Directed Reading or 299.2, Directed Research, in the fall of the senior year and 299.8, Honors in Art History, in the spring semester. The program requires that a preliminary draft be completed by the third week in March. The final version of the thesis is due one week before the last day of classes. A second reader, chosen by the student and the advisor, will participate in the final evaluation. Credit is given for course work completed, even if a student is not recommended for honors. Acceptance into the Honors Program is based on review by program faculty. Staff/Offered every year

299 SEC.9 INTERNSHIP

Staff

Studio Art

■ PROGRAM FACULTY

Sarah Buie, M.F.A., program director: graphic design, museum design and interpretation

Elli Crocker, M.F.A.: drawing, painting

■ PART-TIME FACULTY

Joanna Bodenweber, MFA: foundation studies, graphic design

Stephen DiRado, B.F.A.: photography

Ron Rosenstock, M.A.: photography

Robert Schelling, B.A.: sculpture

Fred Simon, B.S.: video production

Sarah Walker, MFA: foundation studies, drawing, painting

Patricia Woods, M.A.: foundation studies, printmaking

■ EMERITUS

Donald W. Krueger, M.F.A.: foundation studies, drawing, painting, illustration

■ UNDERGRADUATE PROGRAM

The studio art major is designed to meet a number of student needs and interests: preprofessional preparation for graduate study and/or a career in art, design, art education, arts management, art therapy, or other arts-related fields; the satisfaction of personal interest in art and design; significant involvement in the creative process; and a meaningful focus of liberal education.

The studio art major affords a high degree of flexibility in developing a program suited to individual needs and changing interests. A strong advising program assists students in curriculum planning, identifying areas of major interest, and preparing for graduate study or a career. Areas of specialization include drawing and painting, photography, graphic design, illustration, printmaking, sculpture and three-dimensional design, and video production.

In addition to course offerings, there are also exhibitions of the work of contemporary artists, course-related exhibitions, and exhibitions of senior thesis work in the University Gallery; field trips to galleries and museums as part of several studio courses; and, in the University Center's Craft Studio, opportunities for extracurricular involvement in arts and crafts activities.

■ THE STUDIO ART MAJOR

The studio art major normally consists of fourteen courses: twelve studio courses and two art history courses. The studio courses, with approval of the program advisor, may include studios in music, theater arts, screen studies, and cartography as well as student-initiated non-traditional experiences. In certain circumstances, and with approval of the program director, fewer studio art courses—but no less than eight—may fulfill the major.

Admission to the studio art major and to the honors program is selective, and students are expected to maintain an above-average academic record. Admission to the studio art major will occur, with department approval, only after the student has fulfilled the requirements of the University's Program in Liberal Studies (or the equivalent). Students considering majoring in studio art should complete both of the introductory "studio perspective" courses—100 and 102—before making a final decision.

■ HONORS IN STUDIO ART

Students with a strong interest in art and design and a commitment to intensive study and who have completed 12 studio courses with at least a B average may, with department approval, elect the honors sequence: two 200-level studios and a two-semester, two-credit senior thesis. Students are expected to use the honors courses and thesis to develop a body of preprofessional studio work in preparation for graduate study or a career in the arts. The thesis may be done only as a senior, and will be passed on by a faculty panel, with selected works from the thesis and exhibited at the end of the year. Credit is given for course work completed, even if a student is not recommended for honors.

■ COMBINED AND DOUBLE MAJORS

Eight studio courses and two art history courses normally serve as the studio art component of a double major or a student-designed major. A combined studio art-art history major, requiring a minimum of eight studio courses, may be developed in consultation with the studio art and art history program advisors.

■ NONMAJORS

Studio art courses are open to all students, majors and non-majors alike; certain studio courses satisfy the University's aesthetic perspective requirement. Those students interested in studio art but majoring in other disciplines may develop a complementary four- or five- course sequence in any of the fields of study within the program, such as graphic design or photography, among others.

■ COURSES

100 and 102 are "studio perspectives" designed to introduce students to the nature of visual language and the process of creative thought and action and to encourage the development of visual communication and expression skills. Although as a rule not prerequisites for other studio courses, these studio perspectives are strongly recommended for both majors and non-majors as an introduction to and preparation for additional work in studio art. The specific content of each course may vary with the instructor.

100 VISUAL STUDIES—DESIGN/ STUDIO, LECTURE, DISCUSSION

A consideration of the process of visual perception and visual problem-solving/figure field relationships, two-dimensional pattern and form, and theory and dynamics of color. Problems in three-dimensional design may be introduced at the discretion of the instructor. Open to nonmajors. Staff/Offered every year

102 VISUAL STUDIES—DRAWING/ STUDIO, LECTURE, DISCUSSION

A consideration, primarily through drawing, of the more subjective aspects of visual language, of basic concepts of space and picture plane, and of contemporary modes of visual thinking and expression. Collage and elementary painting problems may be introduced at the discretion of the instructor. Open to nonmajors. Staff/Offered every year

120 INTRODUCTION TO PHOTOGRAPHY: THE ZONE SYSTEM/STUDIO, LECTURE, DISCUSSION

An introduction to the art and craft of black-and-white photography emphasizing the zone system and including camera operation, developing, printing, and finishing techniques. Students must have a variable setting 35 mm camera with a built-in or hand-held exposure meter, and must provide their own film and paper. Open to nonmajors. Prerequisite: permission of instructor. Mr. DiRado, Mr. Rosenstock, Staff/Offered every semester

121 INTERMEDIATE PHOTOGRAPHY/STUDIO, LECTURE, DISCUSSION

Continues the refinement of photographic seeing and darkroom techniques. Considers contemporary modes of photography and emphasizes development of personal vision.

Open to nonmajors. Prerequisite: 120 or acceptable portfolio, and permission of instructor. Mr. DiRado, Mr. Rosenstock, Staff/Offered every year

124 INTRODUCTION TO GRAPHIC DESIGN/STUDIO, LECTURE, DISCUSSION

Introduces the process of solving communication problems through the synthesis of verbal and visual information. Consideration of design forms (book, poster, brochure, sign, map, exhibition) from historical and aesthetic viewpoints; introduction to selected media (typography, drawn and photographed images, color) through studio exercises and applied problems. Open to nonmajors. Ms. Buie/ Offered every year

125 GRAPHIC DESIGN PROJECTS/ STUDIO, LECTURE, DISCUSSION

Intermediate level projects in graphic design. Open to nonmajors. Prerequisite: 124 or permission of instructor. Ms. Perras/Offered every year

128 DRAWING: STRUCTURE/ STUDIO, LECTURE, DISCUSSION

Through various perceptual exercises and drawing techniques, the student will learn to effectively translate three-dimensional form and space onto a flat surface. The underlying structure of a form—as well as the underlying structure of drawing—will be examined at length. Open to nonmajors. Prerequisite: instructor permission. Ms. Crocker/Offered every year

129 DRAWING: FIGURE/STUDIO, LECTURE, DISCUSSION

This course will focus on the human figure through various drawing methods, with analysis of the structure and anatomy of the body as well as exploration of the expressive potential of the human figure. Prerequisites: 100 or 102 or 128 or instructor permission. Ms. Crocker/Offered every year

132 BEGINNING PAINTING/ STUDIO, LECTURE, DISCUSSION

The course will introduce the fundamentals of craft and explore the synthetic possibilities of this medium, while also providing opportunity for self-expression. Focus will be on the issue of material—both the materials employed by the painter, and the materials the painter wishes to simulate. Prerequisites: 100 or 102 or 128 or instructor permission. Ms. Crocker/ Offered every year

133 PAINTING/STUDIO, LECTURE, DISCUSSION

A continuation of the study of painting with increasing emphasis on individual development and direction. Prerequisite: 132 or instructor permission. Open to nonmajors. Ms. Crocker/Offered every other year

136 INTRODUCTION TO SCULPTURE/STUDIO, LECTURE, DISCUSSION

An introduction to modes of three-dimensional creation through a variety of traditional and contemporary materials and concepts. Alternating emphasis on sculptural objects, the human figure, and issues of architectural/ environmental expression. Open to nonmajors. Prerequisite: instructor permission. Mr. Schelling/Offered every year

137 SCULPTURE PROJECTS/ STUDIO, LECTURE, DISCUSSION

An intermediate-level course leading to the development of personal direction and expression in three-dimensional form. Open to nonmajors. Prerequisite: permission of instructor. Staff/Offered periodically

158 PRINTMAKING—INTAGLIO/ STUDIO, LECTURE, DISCUSSION
Introduction to the techniques and aesthetic of intaglio printing—primarily hard and soft ground etching methods, embossment and aquatint—on metal plates. At the discretion of the instructor, the course may include methods of engraving, drypoint, and collagraph. Open to nonmajors. Prerequisite: instructor permission. Ms. Woods/Offered every year

162 PRINTMAKING—MONOTYPE AND RELIEF/STUDIO, LECTURE, DISCUSSION
The study of techniques of monotype printing as an integration of drawing, painting, and printmaking, and the investigation of black and white and color lino and woodcut relief printing. Open to nonmajors. Prerequisite: instructor permission. Ms. Woods/Offered every year

167 INTRODUCTION TO VIDEO PRODUCTION/STUDIO, LECTURE, DISCUSSION
An introductory workshop in seeing and thinking in electronic imaging techniques and processes. Open to nonmajors. Mr. Simon/ Offered every semester

171 VIDEO PRODUCTION PROJECTS/STUDIO, LECTURE, DISCUSSION
Intermediate individual and/or group work in video. Open to nonmajors. Prerequisite: 167 or appropriate video production course(s) and permission of instructor. Mr. Simon/Offered every year

174 CONTEMPORARY DIRECTIONS/ STUDIO, LECTURE, DISCUSSION
An intermediate-level course. Experiential examination of current movements, directions, styles, and attitudes in art. Open to nonmajors. Prerequisite: appropriate introductory course(s) and/or permission of instructor. Staff/Offered periodically

182 TECHNICAL THEATER
See listing under Theater Arts 120. Ms. Kurki/Offered every year

184 DESIGN FOR PERFORMANCE
See listing under Theater Arts 123. Ms. Kurki/Offered every year

200 PHOTOGRAPHY PROJECTS/ STUDIO, LECTURE, DISCUSSION
Continues the study of the techniques and aesthetics of black-and-white photography. Students have the opportunity to pursue individual photographic projects in the size and format of their choice. Open to nonmajors. Prerequisite: 120 and/or 121 and permission of instructor. Mr. DiRado, Mr. Rosenstock, Staff/Offered every year

208 TYPOGRAPHY/STUDIO, LECTURE, DISCUSSION
Study of typographic art through studio exercise and applied problems which deal with the organizational and expressive natures of type. Prerequisite: 124 and 125 or permission of instructor. Ms. Buie/Offered every year

234 STUDIO TOPICS/STUDIO, LECTURE, DISCUSSION
An advanced course. Students from all studio disciplines develop individual work in response to thematic issues presented through readings, research, and discussions. Required as the first semester of the senior thesis. Prerequisite: instructor permission. Staff/Offered every year

250 PHOTOGRAPHY STUDIO/ STUDIO, DISCUSSION

Advanced, professionally oriented, individual photographic study. May be taken for credit more than once. Prerequisite: appropriate intermediate and advanced photography courses and permission of instructor. Mr. DiRado, Mr. Rosenstock, Staff/Offered every year

254 GRAPHIC DESIGN STUDIO/ STUDIO, LECTURE, DISCUSSION

Advanced, professionally oriented problems in graphic design. May be taken for credit more than once. Prerequisite: appropriate intermediate and advanced graphic design courses and permission of the instructor. Ms. Buie/Offered every year

256 SEMINAR IN CARTOGRAPHIC DESIGN

See listing under Geography 274.

258 DRAWING AND PAINTING STUDIO/STUDIO, DISCUSSION

Advanced, professionally oriented, individual drawing and painting study. This course will offer the advanced studio art student an opportunity to further refine technical ability in a chosen medium, facilitate critical thinking, and consider the role of meaning in artmaking. Independent work will be stressed. May be taken for credit more than once. Prerequisite: appropriate intermediate/advanced drawing and painting courses and permission of instructor. Ms. Crocker/Offered every other year

262 ILLUSTRATION STUDIO/ STUDIO, DISCUSSION

Advanced, professionally oriented projects in contemporary editorial, book, magazine, and advertising illustration. May be taken for credit more than once. Prerequisite: appropriate intermediate and advanced drawing and painting (and/or photography) courses and permission of instructor. Staff/Offered every other year

266 SCULPTURE STUDIO/ STUDIO, DISCUSSION

Advanced, professionally oriented, individual study of sculpture, and spatial and three-dimensional design. May be taken for credit more than once. Prerequisite: appropriate sculpture experience and permission of instructor. Staff/Offered every year

270 PRINTMAKING STUDIO/ STUDIO, DISCUSSION

Advanced, professionally oriented, individual study in printmaking. May be taken for credit more than once. Prerequisite: appropriate printmaking experience and permission of instructor. Ms. Woods/Offered every year

278 VIDEO PRODUCTION STUDIO/STUDIO, DISCUSSION

Advanced projects in video production. May be taken for credit more than once. Prerequisite: appropriate intermediate-level video production courses and permission of instructor. Mr. Simon/Offered every year

280 SENIOR STUDIO/ STUDIO, DISCUSSION

Advanced, preprofessional, independent work under faculty supervision, in one of the studio media. May be taken for credit more than once. Prerequisite: appropriate advanced courses and permission of program director. Staff/Offered every year

289 SENIOR THESIS

Required of honors students; optional for other studio art majors. The development of a body of preprofessional work to be presented to the faculty with oral and written thesis support. Prerequisite: instructor permission. Staff/ Offered every year

SPECIAL OFFERINGS

299 SEC. 4 FIELD PROJECT
Staff

299 SEC. 5 SPECIAL PROJECT
Staff

299 SEC. 6 SPECIAL TOPICS
Staff

299 SEC. 9 INTERNSHIP
Staff

Music

PROGRAM FACULTY

Gerald R. Castonguay, Ph.D.: program director: musicology

Linda J. Dusman, D.M.A.: theory, composition, computer music

PART-TIME FACULTY

Barbara Barry, Ph.D.: music history

Robert Chadwick, M.Mus.: bassoon

Peter Clemente, M.Mus.: classical guitar

Louisa Striker Damiano, B.Mus.: French horn

Jean De Mart, M.Mus.: flute

Bruce P. Diehl, B.Mus.: saxophone

Robert Eshbach, M.Mus.: violin and viola

Richard Falco, B.A.: jazz studies and jazz guitar

Mary Ferrante B.A.: voice

Catherine Fuller, M.Mus.: piano

David Hodgkins, M.Mus.: conducting

Bruce Hopkins, M.Mus.: trumpet

Richard A. Odgren, B.Mus.: jazz piano

Caroline Worthington, B.Mus.: cello

Katherine Matasy, M.Mus.: clarinet

Staff: trombone and low brass

ADJUNCT FACULTY

Hartmut Kaiser, Ph.D.: German romanticism, music, literature, and aesthetics

EMERITUS

Wesley M. Fuller, M.Mus.: theory, composition, electronic and computer music

UNDERGRADUATE PROGRAM

The music program offers both a major and a minor, as well as courses and activities for the nonmajor. Courses are designed to teach students to listen to music intelligently, to develop musical perception, to master basic skills of music and apply them creatively, and to acquaint students with representative works from various periods of music history. The study of music can open new perspectives on many aspects of culture and society and the program stresses the advantages of combining professional musical development with the humanistic breadth offered by a strong liberal education.

Courses are open to majors and nonmajors, and assignments are designed to suit the different goals and backgrounds of the students in each category.

■ THE MUSIC MAJOR

Fourteen courses are required for the music major:

Requirements:

1. Theory: 121, 122, 123, 124
2. Music History: 101, 102, 103
3. Private Study: 180 (Two semesters—one unit each—of private instruction taken after completion of Music 121)
4. Performing Groups: a minimum of four semesters in 170, 171, 172, 173, or 174 (these are taken for non-credit).
5. One seminar at the 200 level, either in history or in theory/composition.
6. Two music electives, selected from computer music, World Music, history, and theory seminars, or two additional semesters of 180. Students may also fulfill this requirement through tutorials, directed readings, or special projects. For the non-honors major, the second elective—taken during the senior year—is a capstone project fulfilled by taking 299 Directed Reading, 299 Special Project, or a second seminar at the 200 level.
7. Related areas: two courses, one within the Visual and Performing Arts in art history, studio art, theater arts, or screen studies; and one outside the Visual and Performing Arts in areas that relate to the major. For example, a major in the music history track focusing on French music of the late nineteenth and early twentieth centuries could select a course dealing with the French language, French literature, European history, or cultural theory.
8. A minimum skills test, including sight-singing and dictation at a level of proficiency necessary for successfully pursuing the major, must be passed during the sophomore year. A keyboard proficiency test must be passed during the first semester of the junior year.

The four semesters (two required, two optional) of private lesson fees for the major are covered by regular tuition payment.

■ HONORS

Admission to the Honors Program is by approval of the music faculty. Students may elect to pursue one of four different honors tracks: history, theory, composition, or performance. Application to the Honors Program in history, theory, or composition is done at the beginning of the junior year. Application to the Honors Program in performance must be done at the beginning of the freshman year.

Prospective majors who wish to pursue honors in performance must request an audition and assessment of their potential regarding the honors performance track at the start of their first year at Clark. Formal admission into the honors performance track requires a second audition at the start of the sophomore year.

■ HONORS IN HISTORY, THEORY, OR COMPOSITION

Requirements:

The fourteen courses required for the music major, plus a project (a total of fifteen courses) are required for the Honors Program in history, theory, or composition. The honors student will replace the two music electives of the music major (item six of the requirements) with study in a special area through either seminars or directed studies. These two special electives lead into the capstone project for the Honors Program (Music 299), where the student will develop a thesis in history or theory, or an extended composition.

HONORS IN PERFORMANCE

Requirements:

The fourteen courses required for the music major, plus two additional semesters of private study, and a senior capstone project culminating in a recital (a total of seventeen courses), are required for the Honors Program in performance. The honors student will replace the two music electives of the music major (item six of the requirements) with two semesters of private lessons for credit (Music 180). Two additional semesters of Music 180 (for a total of six semesters of private study) culminate in a full recital and a companion capstone project (Music 290) dealing with the stylistic analysis of the music to be performed in the recital. At least four appearances in student recitals, including a half recital during the junior year, precede the senior recital. The lesson fee in the honors performance track is covered by regular tuition payment during the sophomore through senior years. It is strongly urged that Music 121 be successfully completed by the end of the first year.

NONMAJORS

All of the courses, seminars, and activities in the music program—with the exception of senior tutorials (230, 240, 250, 260)—are open to qualified nonmajors. Students who have a strong interest in music but whose major lies in another discipline can declare a minor in music. The music minor centers on a core of studies in one of five specific areas.

THE MINOR IN MUSIC

Requirements:

1. Music 10, Introduction to Music
2. Music 110, Rudiments of Music (or equivalent)
3. One course from the 100-level history or theory courses that would link to work in student's specific area of specialization (e.g., Music 103, Twentieth Century, for the minor in Computer Music)
4. Three additional courses in one of five specific areas of music:

a. Minor in Performance
Three semesters of Music 180. (For information on tuition coverage, see description of Music 180). Students who wish to specialize in performance should arrange for an audition by contacting the program director. Audition will determine acceptance into the minor.

b. Minor in Computer Music
Music 140, Computer Music I
Music 141, Computer Music II
Music 270, Directed Studies in Computer Music

c. Minor in Jazz Studies
Music 150, Jazz Theory
Music 151, Jazz History
Music 250, Tutorial in Jazz Composition

d. Minor in Music History
any three of the following music history courses and/or 200 level music history seminars:
Music 101, Medieval, Renaissance, Baroque
Music 102, Classical and Romantic Periods
Music 103, Twentieth Century
Music 210, History Seminar

e. Minor in Music Theory
  - Music 121, Theory I: 18th-Century Practice, and any two of the following:
  - Music 122, Theory II: 19th-Century Practice
  - Music 123, Theory III: 20th-Century Practice
  - Music 124, Theory IV: Counterpoint

■ PERFORMING ORGANIZATIONS

Nonmajors and majors may audition for a variety of organizations which rehearse regularly and perform several yearly concerts. These groups include the Clark Concert Choir and Chamber Chorus, Instrumental Chamber Ensembles, and the Jazz Workshop Ensembles.

■ PRIVATE LESSONS

Private lessons for nonmajors and majors are offered with or without course credit in several areas. See course descriptions of Music 180, Private Instruction for Instruments and Voice (for credit) and Music 18, Private Instruction for Instruments and Voice (non-credit).

■ PREPROFESSIONAL PROGRAMS

Students interested in such professions as music therapy, concert management, ethnomusicology, or music education may combine music courses with appropriate courses from other disciplines to create an individually-designed major. The requirements for such preprofessional programs are jointly determined by the student and an advisory committee made up of one music faculty member (who serves as chair) and two faculty members from other disciplines.

Although the music program does not offer specific courses in music education, music majors interested in music education may take courses in the music curriculum, in conjunction with teaching courses through the Education Department. For more information about this option, please contact the Education Department.

■ INTRODUCTORY COURSES

010 INTRODUCTION TO MUSIC/ LECTURE, DISCUSSION

Designed for the nonmajor, the goal of the course is to expand the concept of the musical experience and to develop discriminating listeners. Taught jointly by several faculty members, it also provides an introduction to the music program. The course includes an introduction to principles of rhythm, pitch, timbre (and their notations); the principles of structure; the aesthetics of music; specific forms including fugue, sonata form, variations; and selected historical styles. Staff /Offered every semester

011 WORLD MUSIC/ LECTURE, SEMINAR

Students study and listen to the differences and likenesses in music from a wide variety of cultures and consider the ways in which music, ranging from classical art music to music for work and communal celebration, functions within cultures. Musics of India, Africa, Japan, China, and Iran are some of the recurring areas. Guest performers of ethnic music are part of the course. Ms. Dusman/ Offered every other year

110 RUDIMENTS OF MUSIC/ LECTURE, TUTORIAL, LAB

This beginning course in the fundamentals of music requires no previous musical training.

Students learn to understand, hear, recreate, and write the basic elements of the pitch and rhythmic notation system, including scales, keys, and elementary melodic and harmonic organization. Skill training begun in this course enables the student to pursue more successfully private instrumental or vocal instruction, and to begin work in composing and arranging. Ms Dusman/Offered every year

■ MUSIC HISTORY

101 MEDIEVAL, RENAISSANCE, BAROQUE/LECTURE, DISCUSSION

Intended for both the general student and the music major, this survey begins with the early Christian chant and includes a study of the medieval song and motet with special emphasis on the music of Guillaume de Machaut. The study of Renaissance music revolves around the works of Josquin des Prez and culminates with the music of Palestrina and Lassus. The survey of Baroque genres (opera, oratorio, cantata, sonata, concerto, and dance suite) focuses on the music of Monteverdi, Purcell, Corelli, Couperin, Rameau, Vivaldi, Bach and Handel. Evaluation is based on listening exams, quizzes, and papers. When possible, works are performed in class. Ms. Barry, Mr. Castonguay/Offered every year

102 CLASSICAL AND ROMANTIC PERIODS/LECTURE, DISCUSSION

Intended for both the general student and the music major, this survey begins with the music of eighteenth-century Vienna and focuses on the music of Haydn and Mozart and the shift in musical style of Beethoven's works leading to the major figures of nineteenth-century Romanticism. The genres of symphony, chamber music, opera, and song are studied through the works of Schubert, Berlioz, Schumann, Mendelssohn, Chopin, Brahms, Tchaikovsky, Wolf, Mahler, Bruckner, Verdi, Wagner, Elgar, Franck, Fauré, and Richard Strauss. Evaluation is based on listening exams, quizzes, and papers. When possible, works are performed in class. Mr. Barry, Mr. Castonguay/Offered every year

103 TWENTIETH CENTURY/LECTURE, DISCUSSION

This history of twentieth-century music explores the abandonment of functional tonality after 1900 and its replacement with new musical systems, and the remarkable rejections and explorations which characterize the musical world after 1945. The first half of the century will be covered by studying important composers within a chronological framework, while the second half will be studied in terms of compositional trends. Study of the varied styles and the spirit of experimentation that is particularly characteristic of the second half of the century is enlivened through in-class performances and projects that provide hands-on experience with this music. Ms. Dusman/Offered every year

210 HISTORY SEMINAR

For the advanced music student, rotating topics that include, but are not limited to the following: J.S. Bach and His Music; Beethoven: The Man and His Music; Amadeus: The Life and Music of Mozart; French Impressionism; Richard Wagner's Music Dramas: Myth and Innovation. Prerequisites: 101 and 102 or permission of the instructor Mr. Castonguay/ Offered every year

230 SENIOR TUTORIAL IN MUSIC HISTORY

In this tutorial the student develops work (e.g., a paper, composition, or performance) in consultation with the instructor. For majors only. Prerequisite: permission of instructor. Staff/Offered every semester

With permission of the program director the following courses offered by other departments may be taken for music history, criticism and theory credit.

GERMAN 168 MUSIC IN GERMAN LITERATURE AND THOUGHT

See listing under Foreign Languages and Literatures.

■ MUSIC THEORY COURSES

121 THEORY I: 18TH-CENTURY PRACTICE/LECTURE, TUTORIAL, LAB

Explores the system of tonal music commonly employed by composers of the eighteenth- and early nineteenth-centuries, as well as by composers of popular music today. This study, incorporating exercises, composition, analysis, and performance, also examines the way students listen to music in general, thus leading to a deeper understanding of the musical process. Ms. Dusman/Offered every year

122 THEORY II: 19TH-CENTURY PRACTICE/LECTURE, TUTORIAL, LAB

Deals with problems in analysis, composition, and orchestration in the chromatic style of the nineteenth century. Works of Beethoven, Chopin, Schumann, Wagner, and Brahms are analyzed and used as compositional models. The harmonic language of impressionism, with its emphasis on scalar control, also is examined. Prerequisite: 121. Ms. Dusman/Offered every year

123 THEORY III: 20TH-CENTURY PRACTICE/LECTURE, TUTORIAL

Compositional techniques of major twentieth-century composers are analyzed and used as a basis for compositional assignments. Prerequisite: 122 or permission of instructor. Ms. Dusman/Offered every year

124 THEORY IV: COUNTERPOINT/LECTURE, TUTORIAL

For the advanced music student, the styles and procedures used by composers throughout the long development of Western art music are studied as the principal models for independent creative work. While emphasizing counterpoint as a procedure, students are expected to have a good background knowledge of music theory and history. Music 121, 122, and 123 are prerequisites; and previous or concurrent registration in the music history sequence is strongly advised. Ms. Dusman/Offered every year

140 COMPUTER MUSIC I/STUDIO, LECTURE, DISCUSSION

This course explores computer music as a natural, historical, and artistic result of twentieth-century musical and technological achievements. Students study basic theory of how a computer generates sound along with the principal synthesis techniques used in computer music, as well as learn to use a particular computer music program and produce taped examples of assignments. In addition, a group of important musical works is studied. Ms. Dusman/Offered every year

141 COMPUTER MUSIC II/STUDIO, LECTURE, DISCUSSION

A continuation of 140. Small group tutorials are given in the studios, and each student has independent studio time for the development of individual projects throughout the course. Prerequisite: 140 Ms. Dusman/Offered every year

150 JAZZ THEORY/ LECTURE, TUTORIAL

Includes a study of the rhythmic/harmonic/melodic structures of jazz, the scalar basis of improvisation, and voicing practice as it pertains to scoring for small and large ensembles Prerequisite: 110 or passing of placement examination in rudiments. Staff/ Offered periodically

151 JAZZ HISTORY/ LECTURE, TUTORIAL

Centers on a study of the evolution of jazz style from its nineteenth-century beginnings to the present, including: African roots, minstrels, ragtime, Dixieland, swing, bop, progressive, cool, free-form, and third-stream. A research paper and a final exam are required. Staff/Offered periodically

220 THEORY/COMPOSITION SEMINAR

Rotating topics that include, but are not limited to the following—Composing the Greek Chorus; John Cage: Composer as Revolutionary; Arnold Schönberg: The Reluctant Revolutionary; Sound Invention Workshop: The Search for Relevancy; Experiments in Tuning and Formal Design; Computer-Assisted Composition; Form and Analysis; Conducting; Composition. Prerequisites 121, 122, 123, 124 Ms. Dusman, Mr. Belet/Offered every year

240 SENIOR TUTORIAL IN COMPOSITION

In this tutorial the student develops work (e.g., a paper, composition, or performance) in consultation with the instructor. For majors only. Prerequisite: permission of instructor. Staff/Offered every semester

250 TUTORIAL IN JAZZ COMPOSITION

In this tutorial the student writes original scores for performance by a workshop ensemble. Prerequisite: 151 and permission of instructor. Staff/Offered periodically

260 SENIOR TUTORIAL IN THEORY

In this tutorial the student develops work (e.g., a paper, composition, or performance) in consultation with the instructor. For majors only. Prerequisite: permission of instructor. Staff/Offered every semester

270 DIRECTED STUDIES IN COMPUTER MUSIC/STUDIO, LECTURE, DISCUSSION

Advanced work in any of the main areas of computer music: composition, hardware or software design, and psychoacoustics. Resources of the Tri-College Electronic Music Program are made available to students. Prerequisite: 140, 141. Ms. Dusman, Mr. Belet/Offered periodically

■ PERFORMANCE COURSES

189 PRIVATE INSTRUCTION IN INSTRUMENTS AND VOICE

Areas offered include: piano, jazz piano, voice, clarinet and saxophone, flute, classical guitar, jazz guitar, violin and viola, French horn, trumpet, bassoon, trombone and low brass, cello, and conducting. Lessons are taken for course credit. In areas not currently offered at Clark, the Music Program will find a qualified instructor. Award of credit in the off-campus study requires special permission from the program director. No credit is awarded for off-campus study in those areas currently available at Clark. Prerequisites: for the minor, Music 010 and either Music 110 or Music 121; for the major, Music 101 and 121 (co-registration is permissible for the major). Students are admitted to Music 180 lessons on a competitive basis, which includes an audition and successful completion of the prerequisite courses. Approved minors receive three semesters of lessons covered by tuition, majors receive two semesters of lessons (with options available for one or two additional semesters covered by tuition), and majors in the Honors Performance track receive six semesters of lessons covered by tuition. Specific details are available in the Music Program office. Staff/Offered every semester

018 PRIVATE INSTRUCTION IN INSTRUMENTS AND VOICE

Lessons are taken for noncredit. Areas offered: same as 180 above. Lessons taken for noncredit require no prerequisite and are recommended for beginners. The fee is not covered by tuition. Staff/Offered every semester

160 CHORAL MUSIC AND CONDUCTING/LECTURE, TUTORIAL

Styles of choral music from different periods are studied with the aid of scores and recordings. Students learn basic choral conducting techniques. Prerequisite: 121 or permission of instructor. Staff/Offered periodically

■ SPECIAL OFFERINGS

290 CAPSTONE PROJECT

299 SEC. 1 DIRECTED READING

Staff

299 SEC. 2 DIRECTED RESEARCH

Staff

299 SEC. 3 DIRECTED WRITING

Staff

299 SEC. 4 FIELD PROJECT

Staff

299 SEC. 5 SPECIAL PROJECT

Staff

299 SEC. 6 SPECIAL TOPICS

Staff

299 SEC. 8 HONORS

Staff

299 SEC. 9 INTERNSHIP

Staff

The following musical activities are open to all undergraduate and graduate students. Auditions are held during the first week of the fall semester. Although no credit is awarded, the transcript of any undergraduate who completes the assigned performance requirements will include a listing of the particular activity for which he or she was registered.

170 CLARK CONCERT CHOIR/ REHEARSAL, PERFORMANCE

A chorus of 40 to 50 voices, the choir presents two major concerts each year on the Clark campus as well as in off-campus appearances. Mr. Hodgkins/Offered every semester

171 CLARK CHAMBER CHORUS/ REHEARSAL, PERFORMANCE

This is a small, specialized singing group chosen from the larger Clark Concert Choir by the conductor. Admission is by audition. Mr. Hodgkins/Offered every semester

173 CHAMBER MUSIC ENSEMBLES/ REHEARSAL, PERFORMANCE

The number of small ensembles is determined by the performing talent in a given year. Admission is by audition. Staff/Offered every semester

174 JAZZ WORKSHOP/ REHEARSAL, PERFORMANCE

Includes ensemble performance practice with weekly rehearsals throughout the year. An audition is required. Mr. Falco/Offered every semester

Screen Studies

PROGRAM FACULTY

Marvin D'Lugo, Ph.D., program director: Spanish and Latin American cinema

Dana Benelli, Ph.D.: American cinema, documentary cinema, film theory and criticism

Marcia Butzel, Ph.D.: French cinema, Italian cinema, screen theory and criticism

Walter Schatzberg, Ph.D.: German cinema

ADJUNCT FACULTY

Michael K. Spingler, Ph.D.: French cinema

Paul Wilkes, M.S.: documentary film

UNDERGRADUATE PROGRAM

The Screen Studies Program deals with arts and artifacts of the moving two-dimensional image, usually combined with sound; it is concerned, in other words, with the study of film, broadcast television, and other forms of video. The program offers both a major and a minor, and stresses the importance of a liberal arts background, for the screen arts touch upon and are affected by all sectors of contemporary culture and society. Classes provide a core of basic and advanced knowledge of the screen arts and media while encouraging students to explore diverse connections and influences, ranging from the visual arts, drama, literature, and aesthetics to sociology, psychology, history, and economics.

Nonmajors take screen studies courses for many different reasons: to acquire knowledge that relates to their interests in other disciplines, to gain a better understanding of the roles film and television play in their everyday lives, or to understand the importance of the screen media as cultural and artistic forms.

Those considering careers in the screen arts or related areas usually major in screen studies. In addition to being of special benefit for those planning graduate study or a career in the communications fields, the major also may be of interest to those seeking a liberal arts education that speaks directly to questions of contemporary life, culture, and the arts.

Students interested in film and video production may take the Studio Art Program's production courses and/or gain production experience through professional internships.

THE SCREEN STUDIES MAJOR

Students majoring in Screen Studies enroll primarily in courses on the history, theory, and criticism of film, broadcast television, and other forms of electronic media. Requirements for the major are outlined below. They include courses in screen and courses in a related area, which may be discipline-specific (such as history, English, a foreign language/ culture) or interdisciplinary (such as communications studies). The coherence of the related area is determined by the student in regular consultation with the major advisor. The Screen Studies major consists of at least 15 courses—a minimum of ten courses in screen (see item 1 of the requirements below), and at least five courses in a related area, with three of those five courses at the advanced level (see item 2 of the requirements below). In order for a course to provide credit toward the major, a letter grade of "C" or better must be achieved.

Requirements:

1. Majors are required to take a minimum of ten courses in Screen Studies.

Of the ten Screen Studies courses, three are specifically required:

a. 101, Introduction to Screen Studies (to be taken as early as possible).

b. One practicum course, normally Studio Art 167, Introduction to Video Production, or its equivalent. No more than two practicum courses may count toward the minimum of ten screen courses required for the major. (If students do take additional practicum courses, they will count toward graduation, but not toward the major.)

c. 290, Advanced Problems in Screen Studies, an advanced topics course resulting in a major term paper.

In addition to these specific required courses, majors must complete:

a. At least two screen history courses such as 120, History of American Narrative Film; 121, Survey of International Film Movements; 122, History of Broadcasting and Television; or 163, History of French Cinema Before World War II. (121 has not been offered in recent years, but will be taught in 1995).

b. At least one screen theory course, such as 184, Film as Narration; 231, Film Theory; or 305, Feminist Film Theory and Criticism.

c. One course on a national cinema , such as 146, Introduction to Cinema of Spain; 148, Introduction to the Cinema of Latin America; 150, New German Cinema; 152, Japanese Cinema; or 155, Studies in Italian Film: Neorealism.

d. Additional elective screen studies courses to bring coursework to the ten required screen studies courses.

2. Majors must demonstrate competence in a related area pertinent to the student's particular emphasis in screen studies. Requirements for the related area may be met in one of two ways: through completing requirements for a double major, or by completing five courses (chosen in consultation with the major advisor) which together form a coherent group. Three of these related courses must be at the advanced level.

Sequence of courses

The entry-level course to the major, 101, Introduction to Screen Studies, fulfills prerequisites for advanced screen courses. As with the majority of courses in the major, the introductory course emphasizes critical analysis and conceptual knowledge, rather than production. Courses numbered from the 140 to 160 level are considered intermediate-level courses. Most screen courses numbered between 180 to 200 are advanced-level courses. The most advanced-level courses are numbered in the 200s and 300s. For the major, 290, Advanced Problems in Screen Studies is the capstone senior seminar, which culminates in a major term paper. The content of 290, usually taught in the fall semester, varies with the instructor. In recent semesters, topics have included "Concepts of National Cinema," "Authorship," and "Cuban Cinema." 305, Feminist Film Theory and Criticism, is a graduate-level theory course on gender and film which is crosslisted with the Women's Studies Ph.D. Program. Advanced undergraduates may take 305 with permission.

Internships, Study Abroad, Special Projects

One unit of internship credit (299 Sec. 9, Internship) can be counted toward the major. In past years, students have held internships with local and regional media concerns, such as Greater Media Cable and WHDH-TV in Boston, and with the British Film Institute in London. Majors have opportunities for study abroad, often by pursuing 1-2 units of academic coursework and an internship during one semester. Clark's London Program has been the primary sponsor for study abroad in the major. A special topics course, (299 Sec. 6, Special Topics) is available for advanced students, usually second-semester seniors, who wish to pursue an independent research project. In a recent special topics course on "Writing Film History," students organized and presented a campus film series on Japanese cinema and gender (including researched program notes, a panel discussion, and a term paper).

■ NONMAJORS

All of the courses, seminars, and activities in the Screen Studies program are open to qualified nonmajors. Students who have a strong interest in Screen Studies but whose major lies in another discipline can declare a minor in Screen Studies. The minor consists of six courses.

■ THE SCREEN STUDIES MINOR

Requirements:

1. 101, Introduction to Screen Studies.
2. One film history course selected from 120, History of American Narrative Film; 121, Survey of International Film Movements; 122, History of Broadcasting and Television.
3. One course in a national cinema selected from 146, Introduction to Cinema in Spain; 147, Studies in Spanish Cinema; 148, Introduction to Cinema in Latin America; 149, Studies in Latin American Cinema; 152, Japanese Cinema; 155, Studies in Italian Film: Neorealism; 160, French Culture Seen Through Film: Jean Renoir; 163, History of French Cinema Before World War II; 188, The Culture of the Weimar Republic in Literature, Film, and the Arts.
4. One course that explores critical or theoretical considerations of the film medium, selected from 123, Factual Film and Television; 184, Film as Narration; 231, Film Theory; 290, Advanced Problems in Screen Studies; 299, Gender and Film.
5. Two electives in Screen Studies chosen in consultation with a program advisor.

■ COURSES

Note: The courses listed below are designated as lecture, discussion, or seminar. However, all screen studies courses include viewing of films and/or television programming. Students are usually required to attend separate screening periods in addition to lecture, discussion, or seminar sessions.

101 INTRODUCTION TO SCREEN STUDIES/LECTURE, DISCUSSION

Introduction to screen arts, with emphasis on critical thought and analysis. The course begins with attention to broad categories describing filmmaking activity, such as narrative and non-narrative form, classical Hollywood and art film traditions, genre filmmaking, etc. The latter part of the course is devoted to close textual analysis of the manner in which images and sounds are organized in film and television. Fulfills prerequisites for advanced screen studies courses. Mr. Benelli/Offered every semester

120 HISTORY OF AMERICAN NARRATIVE FILM/LECTURE, DISCUSSION

Intensive overview of the national cinema which has been strongest socially and economically, and which is also often regarded as the most influential in an aesthetic sense. Considers cultural contexts, approaches to film production, distribution and exhibition, and stylistic characteristics of "Hollywood" filmmaking and the alternative practices which have sought to coexist with Hollywood's formidable power. This course is taught as a variable topic, covering either American film through World War II or the American cinema from World War II to the present. Students may elect to take this course more than once, but majors may use the course to fulfill only one screen history requirement. Mr. Benelli/Offered every other year

121 SURVEY OF INTERNATIONAL FILM MOVEMENTS/LECTURE, DISCUSSION

Broad survey designed to acquaint students with major foreign movements in cinema history. Includes readings on and screenings of examples selected from Italian silent epics, early Scandinavian cinema, German Expressionist and Weimar cinema, Soviet montage school, Soviet socialist realism, British documentary school, Nazi cinema, Italian neorealism, Japanese classical cinema, French New Wave, post-New Wave political cinema, Third World cinema, New German Cinema, and various Eastern European schools. Mr. Benelli, Ms. Butzel/Offered every other year

122 HISTORY OF BROADCASTING AND TELEVISION/LECTURE, DISCUSSION

Overview of the history of the broadcast media, from the invention of radio through the development of the television networks and cable transmission. Attention is paid to the aesthetics of the medium, typical programming characteristics, social implications of broadcast materials, and the economic-industrial infrastructure of broadcasting. Mr. Benelli/Offered every other year

123 FACTUAL FILM AND TELEVISION/LECTURE, DISCUSSION

This course opens with a description of the formal elements and textual processes by which documentary films construct their representations of reality. Then, a series of case study analyses of a variety of texts will serve as the basis for exploring documentary formats (TV news, documentary reenactments, cinema vérité, propaganda) and situations in which Hollywood and current television programming have appropriated documentary as a facet of their commercial activities (e.g., in TV movies, semi-documentary films, "infotainment," etc.). Course screenings will be drawn from both classic and contemporary documentaries. Mr. Benelli/Offered every other year

130 FILM GENRE/ LECTURE, DISCUSSION

A course devoted to the study of the major storytelling formats into which much narrative filmmaking (especially that of the American cinema) may be categorized. The course will consider theoretical perspectives, formal description, historical background, and social implications of genres such as the western, gangster film, musical, melodrama, etc., and through this work enable students to engage in and experience the interpretive insights of this critical perspective on the cinema. This course is taught as a variable topic, and may be offered as either an overview of several film genres or as a course concentrating on intensive study of a particular genre. Students may elect to take this course for credit more than once. Staff/Offered every other year

146 INTRODUCTION TO CINEMA IN SPAIN/LECTURE, DISCUSSION

See listing under Spanish 146. Mr. D'Lugo/ Offered every other year

147 STUDIES IN SPANISH CINEMA/LECTURE, DISCUSSION

See listing under Spanish 147. Mr. D'Lugo/ Offered every other year

148 INTRODUCTION TO CINEMA IN LATIN AMERICA/ LECTURE, DISCUSSION

See listing under Spanish 148. Mr. D'Lugo/ Offered every other year

149 STUDIES IN LATIN AMERICAN CINEMA/LECTURE, DISCUSSION

See listing under Spanish 149. Mr. D'Lugo/ Offered every other year

152 JAPANESE CINEMA/ LECTURE, DISCUSSION

How different was/is the Japanese cinema from the classical Hollywood cinema which has dominated the world's commercial filmmaking as a model to be either imitated or resisted? This course will address the issue of difference "from the outside" by engaging in four activities: first, study of the history of the Japanese film industry; second, identification of the characteristic storytelling formats of Japanese cinema; third, formal analysis of the stylistic signatures of its master directors (Ozu, Mizoguchi, Kurosawa, Oshima); and, fourth, study of western criticism's discourse on this national cinema which one critic has called "our dream cinema." Mr. Benelli/Offered every other year.

155 STUDIES IN ITALIAN FILM: NEOREALISM/ LECTURE, DISCUSSION

See listing under Comparative Literature 155. Ms. Butzel/Offered every other year

160 FRENCH CULTURE SEEN THROUGH FILM: JEAN RENOIR/ LECTURE, DISCUSSION

See listing under French 160. Mr. Spingler/Offered every other year

163 HISTORY OF FRENCH CINEMA BEFORE WORLD WAR II/ LECTURE, DISCUSSION

See listing under French 163. Ms. Butzel/Offered every other year

184 FILM AS NARRATION/ LECTURE, DISCUSSION

Explores in depth a central approach to the study of film and gives students intensive training in film analysis. Students will become familiar with trends in narrative theory in order to analyze a range of narratives from world cinema. Specific concepts and topics to be considered include point of view, story structure, semiotic codes, the impression of reality, voice, and spectator positioning. Relationships between film and other art forms will also be considered. Prerequisite: 101 or instructor permission. Ms. Butzel/Offered every other year

188 THE CULTURE OF THE WEIMAR REPUBLIC IN LITERATURE, FILM AND THE ARTS/LECTURE, DISCUSSION

See listing under German 188. Mr. Schatzberg/Offered every other year

191 STUDIES IN COMPARATIVE CULTURE: FRENCH VS. AMERICAN TELEVISION/ LECTURE, DISCUSSION

See listing under Comparative Literatures 191. Ms. Butzel/Offered every other year.

195 DOCUMENTARY FILM/ LECTURE, DISCUSSION

See listing under English 195. Mr. Wilkes/ Offered every year

205 FEMINIST FILM THEORY AND CRITICISM

This course explores the emergence of feminist film criticism from the women's movement of the 1970s and its subsequent "coming of age" via such theoretical frameworks as semiotics, psychoanalysis, and Marxism. Emphasis is placed on understanding the role of critical theory as appropriated by feminist analysis of film and culture. Readings include work by Freud, Lacan, Metz, Mulvey, Kuhn, and DeLauretis. Theory is related to a historical range of international practices, including films by Dulac, Arzner, Deren, Hitchcock, Godard, Ackerman, and Rainer. Ms. Butzel/ Offered every other year

231 FILM THEORY/ LECTURE, SEMINAR

Examines major works of film theory, both classical and contemporary. Readings are drawn from the work of Eisenstein, Bazin, Munsterburg, Arnheim, Burch, Benjamin, Adorno, Kracauer, Metz, Baudry, Heath, Mulvey, Wollen, Bordwell, and others. Prerequisite: 101 or permission of instructor. Mr. Benelli/Offered every year

288 GENDER AND FILM/SEMINAR

This course will explore the ways that gender is produced by the "social technologies" of film and video. We will consider how concepts of sexual difference (masculinity and femininity) organize representation, narrative, and spectatorship in Hollywood and alternative cinemas, and in some television and video. The course will also include study of the history of women's cinema. Course readings will be primarily theoretical and critical, featuring the contributions of feminist film scholars and critics. Prerequisite: 101 or permission of instructor. Ms. Butzel/Offered every other year

289 ADVANCED PROBLEMS IN SCREEN STUDIES/SEMINAR

Advanced studies of specific issues and approaches in the study of the screen arts. Topics vary each time the course is offered. Sample topics: Brechtian cinema; inventing the feature film; Eisenstein as theoretician, filmmaker, and historical figure; the idea of a national cinema; and non-Western filmmaking. Students produce a major term paper. Prerequisite: 101 or permission of instructor. Staff/Offered every other year

SPECIAL OFFERINGS

299 SEC. 1 DIRECTED READING
Staff

299 SEC. 2 DIRECTED RESEARCH
Staff

299 SEC. 3 DIRECTED WRITING
Staff

299 SEC. 4 FIELD PROJECT
Staff

299 SEC. 5 SPECIAL PROJECT
Staff

299 SEC. 6 SPECIAL TOPICS
Staff

299 SEC. 9 INTERNSHIP
Staff

Theater Arts

PROGRAM FACULTY

Raymond J. Munro, M.A.H.: directing, acting theory, independent narrative video

Neil R. Schroeder, Ph.D., program director: theater history and literature, modern drama, Ibsen, speech

Michael K. Spingler, Ph.D.: French theater, comparative drama

PART-TIME FACULTY

Jacquelyn Bessell, M.A.: theater history and literature

Gino DiIorio, M.F.A.: acting

Lauren J. Kurki, B.F.A.: scenic, lighting, and costume design, technical theater

Catherine Quick Spingler, M.A.: costume design

Karin Trachtenberg, M.A.: movement and choreography, expressive therapies

ADJUNCT FACULTY

Kenneth Hughes, Ph.D.

Hartmut Kaiser, Ph.D.

Stanley Sultan, Ph.D.

Virginia Vaughan, Ph.D.

UNDERGRADUATE PROGRAM

Courses in theater arts—open to majors and nonmajors—provide students with a sound liberal education and prepare them for graduate school or professional theater. Each year, the program presents professionally directed productions of classic and contemporary theater. Theater productions auditions are open to any Clark student. Students who take theater arts courses are required, as part of their course work, to participate in these productions. There are also opportunities for students to act and direct in classes, workshops, and student-sponsored productions, and to audition for Clark Center for Contemporary Performance productions.

The Clark Center for Contemporary Performance is a scholarly community of directors, composers, playwrights, choreographers, film/video makers, and critics devoted to the creation, development, and publication of contemporary works of art as well as to theoretical reflection about the works and their performance. The range of such work includes new scripts, original compositions or scores, translations, transformation of poetry into performance pieces, and explorations of the intersection of music, dance, and video in the performance of existing works.

The center is designed to enhance the academic work of the University by organizing and focusing advanced learning through seminars and directed study in music, theater, film, design, literature, and aesthetics. Advanced students are encouraged to develop creative and theoretical projects so that they may take full advantage of the critical evaluation and supervision available at the center, and enrich their educational experience through contact with faculty, other students, and outside artists and performing groups.

■ THE THEATER ARTS MAJOR

The major consists of a minimum of eleven courses with a focus in one of three tracks: theater history and literature; performance; or production.

Required of all majors: (six core courses)

a. 112 The Creative Actor

b. 120 Technical Theater

c. 150 Theater in Western Civilization I

d. 151 Theater in Western Civilization II

e. 155 English Drama I

f. 156 English Drama II

In addition:

Required for the theater history and literature track: (a minimum of five additional courses)

g. 110 How Does a Play Work?

h. at least four additional courses in theater history, dramatic literature, criticism, and aesthetics, as approved by the program director

Required for the performance track:
(a minimum of five additional courses)

g. 111 Voice and Diction

h. 113 Actor as Thinker

i. 116 Movement for the Theater I

j. 213 Studio

k. at least one course from the following:
  117 Movement for the Theater II
  167 French Dramatic Expression
  167 (Studio Art) Introduction to Video Production
  213 Studio (may be repeated)
  219 Directing Seminar

All declared performance majors are required to attend a weekly movement workshop and a weekly voice workshop.

Required for the production track:
(a minimum of six additional courses)

g. 113 Actor as Thinker

h. 123 Design for Performance

i. At least four of the following:
  125 Scenery and Costume Projects (may be repeated)
  126 The Physical Theater/Environmental Studio
  127 Analysis of Theater Production
  219 Directing Seminar
  100 (Studio Art) Visual Studies — Design
  102 (Studio Art) Visual Studies — Drawing
  136 (Studio Art) Introduction to Sculpture
  167 (Studio Art) Introduction to Video Production

Approved courses in art history, aesthetics, studio art, and English (286 through 289)

■ NONMAJORS

All courses and seminars in the theater arts program are open to qualified nonmajors. Students whose major lies in another discipline can declare a minor in theater arts, with a focus on one of three tracks: theater history and literature, performance, or production.

THE MINOR IN THEATER ARTS

Requirements for the history and literature track:

a. One of the following:
  110 How Does a Play Work?
  020 (English) Introduction to Literature and Composition

b. 112 The Creative Actor

c. 120 Technical Theater

d. 150 Theater in Western Civilization I

e. 151 Theater in Western Civilization II

f. One additional course in drama or theater as approved by the program director. Possible choices include 153 Modern Drama I; 154 Modern Drama II; 155 English Drama I; 155 English Drama II; 164 The American Musical Theater; 185 Tennessee Williams; 256 Ibsen; 299.1 Directed Readings; drama courses taught in other departments.

Requirements for the performance track:

a. One of the following:
  110 How Does a Play Work?
  150 Theater in Western Civilization I
  151 Theater in Western Civilization II

b. 112 The Creative Actor

c. 113 Actor as Thinker

d. 116 Movement for the Theater I

e. 120 Technical Theater

f. 213 Studio

Requirements for the production track:

a. 120 Technical Theater

b. 123 Design for Performance

c. One of the following:
  125 Scenery and Costume Projects
  299, section 5 Special Project

d. 126 The Physical Theater/Environmental Studio

e. 150 Theater in Western Civilization I

f. One additional course as approved by the Program Director. Possible choices include: 151 Theater in Western Civilization II; 127, Analysis of Theater Production; and the following Studio Art courses: 100 Visual Studies Design; 102 Visual Studies Drawing; 136 Introduction to Sculpture; 167 Introduction to Video Production; drama courses taught in other departments.

COURSES

110 HOW DOES A PLAY WORK? CRITICAL ANALYSIS AND WRITING/LECTURE, DISCUSSION

Explores a small group of plays representing several styles, modes, and eras of Western drama, with special emphasis on formal analysis—study of the form and structure of each play. The student will be encouraged to arrive at a personal evaluation of the plays. This course satisfies the verbal expression skill in the Program of Liberal Studies. No prerequisite. Several short papers. Mr. Schroeder/ Offered every year

111 VOICE AND DICTION/ STUDIO, TUTORIAL

An intensified phonetic approach to articulation and voice production with some emphasis on speech for the stage and for public occasions. Several laboratory sessions will be provided for individual coaching by the instructor. No prerequisites. This course is non-graded; it must be taken on a credit/no credit basis. Mr. Schroeder/Offered every year

112 THE CREATIVE ACTOR/STUDIO

Through a series of workshops, the student becomes familiar with the basic tools necessary to the art of acting. The approach is based on the techniques of Stanislavski, Viola Spolin, Joseph Chaikin, Robert Cohen, and original exercises, including an introduction to basic voice and movement for the actor. No prerequisite. Limited to 25 students. Mr. Munro, Mr. DiIorio/Offered every semester

113 ACTOR AS THINKER/STUDIO, LECTURE, DISCUSSION

A conceptual approach to acting theory and its application. Through a series of lectures and exercises, the student develops a greater understanding of script analysis, characterization, style, and the relationship of the actor to the audience. A basic course for all students who intend to continue in acting and directing, and a prerequisite for 213, Studio, and 219, Directing Seminar. Prerequisite: 112. Limited to 15 students. Mr. Munro/Offered every semester

116 MOVEMENT FOR THE THEATER I/STUDIO

An exploration of mind/body integration issues, aimed to increase students' understanding and skills of physical freedom and expression. Tools and techniques for developing basic skills of awareness, observation, concentration, and release of habitual tension will be practiced and discussed. Physical approaches to acting will be explored as well as elements of dance and movement composition. Ms. Trachtenberg/Offered every year

117 MOVEMENT FOR THE THEATER II/STUDIO

The ideas and techniques of Movement for the Theater I will be addressed and explored in greater depth. Increased emphasis will be placed on the creative process, and students will develop movement compositions and scene work with a physical approach. Issues of responsibility and performance will also be addressed. Prerequisite: 116 or permission of the instructor. Ms. Trachtenberg/Offered periodically

119 PUBLIC SPEAKING/STUDIO

Students are required to make as many speeches as time permits, so that they may master the fundamentals of public speaking, including the most common situations: presentation of information and persuasive speaking. No prerequisite. Mr. Schroeder/Offered every year

120 TECHNICAL THEATER/STUDIO, LECTURE

Introduction to theatrical production. Techniques and organization involved in providing the stage with scenery, lights, and properties. Drafting, scaled ground plans, elements of design, and styles of production are introduced. Makeup, lighting, and set construction in applied lab/crew requirements.

Ms. Kurki/Offered every semester

123 DESIGN FOR PERFORMANCE/STUDIO, TUTORIAL

Theory of design/function of visual artist in relationship to production, director or choreographer. Collaboration in and development of performance art. Historical research in styles of ornament and production. Drawing, painting, and model building. Lab/crew assignments. Ms. Kurki/Offered every year

125 SCENERY AND COSTUME PROJECTS/STUDIO, TUTORIAL

Intermediate level projects in design research and three-dimensional execution for theater production. Prerequisite: permission of the instructor. May be repeated for credit. Ms. Kurki, Staff/Offered every semester

126 THE PHYSICAL THEATER/ ENVIRONMENTAL STUDIO/ STUDIO, TUTORIAL

Study of designed environment and structure as it relates to performance and the physical theater as well as contemporary installation projects. Study of public spaces, theater architecture, and site-specific work. Ms. Kurki/ Offered every other year

127 ANALYSIS OF THEATER PRODUCTION/SEMINAR

Examination of live theater productions through written and verbal criticism. Critical elements of the concept of production explored through assigned readings and the development of a production proposal/concept. Attendance required at scheduled evening and/or weekend performances in the Worcester/Boston area. A lab fee will be collected to pay for tickets and bus rental. Ms. Kurki/Offered periodically

130-31 THEATER IN THE CLASSROOM/SEMINAR, WORKSHOP

Ms. Trachtenberg/Offered periodically

150 THEATER IN WESTERN CIVILIZATION I/LECTURE, DISCUSSION

A survey of theater and drama from ancient Greece to the Renaissance. The course considers the form and substance of theatrical presentations and the study of several representative plays from each important era and national theater. No prerequisite. This course satisfies the aesthetic perspective requirement. Mr. Schroeder/Offered every other year

151 THEATER IN WESTERN CIVILIZATION II/LECTURE, DISCUSSION

A survey of theater and drama from the seventeenth century to the present, this is a continuation of 150. No prerequisite. This course satisfies the aesthetic perspective requirement. Mr. Schroeder/Offered every other year

153 MODERN DRAMA I/ LECTURE, DISCUSSION

A survey of Western drama and theater from Ibsen to World War II. The course traces the development of modern realistic drama and early experimental reactions to realism. No prerequisite. At least three papers or exams. Mr. Schroeder, Ms. Bessell/Offered every other year

154 MODERN DRAMA II/ LECTURE, DISCUSSION

A survey of Western drama and theater from World War II to the present, which examines several of the major postwar movements and the radical dramatic forms they have produced. This course satisfies the verbal expression skill in the Program of Liberal Studies. No prerequisite. At least three papers or exams. Mr. Schroeder, Ms. Bessell/Offered every other year

155 ENGLISH DRAMA I/ LECTURE, DISCUSSION

Refer to listing under English 122. Ms. Vaughan/Offered every other year

156 ENGLISH DRAMA II/LECTURE, DISCUSSION

Refer to listing under English 123. Mr. Sultan/ Offered every other year.

164 THE AMERICAN MUSICAL THEATER/LECTURE, DISCUSSION

While some attention is paid to the history of the musical theater in the United States, primary emphasis in this course is on the study and analysis of several important contemporary musicals, and on the form and structure of books, lyrics, and music. No prerequisite. At least three papers, exams, or creative projects. Mr. Schroeder/Offered periodically

185 TENNESSEE WILLIAMS/ LECTURE, DISCUSSION

An intensive study of the playwright's work concentrating on his development as an artist. No prerequisite, but some experience in drama and literature is expected. Mr. Schroeder/Offered periodically

199 THE WRITER'S CRAFT/SEMINAR

This course will utilize a series of exercises and discussions to explore different elements of the craft of dramatic writing, offering the student the opportunity to practice the various aspects of scene writing, and to discover the technical elements that comprise a well-wrought scene. The issues of person, location, action, and voice will be addressed critically. As the students' scenes are discussed and examined, ways to reconstruct and refocus the scene will be explored. Mr. Brooks/Offered every other year

205 THE PLAY AND ITS STAGES/SEMINAR, WORKSHOP

A critical approach to the dramatic text based on historical and material conditions of performance. The course considers the changing ways that meanings are made through styles and conventions of performance (including set, costume, mask, and vocal delivery) that are specific to historical and cultural moments. Playwrights considered may include Sophocles, Shakespeare, Racine, Molière, Chekhov, Ibsen, Brecht, Genet, and Beckett. There is scene work in class. Mr. Spingler/ Offered every other year

206 LANGUAGES OF THEATER/ SEMINAR, DISCUSSION

A study of the way meanings are made in theater through structure and sign. The course examines the function of non-verbal communication in theater, especially mask, gesture, movement, and sound. Among the course's concerns will be the influence of certain non-western dramatic traditions such as Noh and Kabuki upon a number of western experimental theaters. Plays may include Euripedes' The Bacchae, Shakespeare's The Tempest, Cocteau's Eiffel Tower Wedding Party and Orpheus, Apollinaire's The Breasts of Tiresias, Jarry's Ubu Roi, Genet's The Balcony, and Pinter's Homecoming. Critical works read include Artaud's The Theater and its Double, Brook's The Empty Space, and Grotowski's Towards a Poor Theater. There will be scene work in class. May be taken as a companion course to 205. Mr. Spingler/ Offered periodically

213 STUDIO

A scene study course applying the methods, theories, and approaches discussed in Actor as Thinker to working on stage, film, and video. Students are required to present several scenes of different periods and styles for discussion, critical written review, and further development by classmates and director. The content varies each time the course is taught. May be repeated for credit. Lab and crew hours are required. Prerequisite: 113. Mr. Munro, Mr. DiIorio/Offered every semester

219 DIRECTING SEMINAR
Introduces the principles of directing for the stage through theory, practical application, and discussion. Students study problems of interpretation and concept; the role of the director as creative and interpretive artist; and relationship to designer, stage manager, and actors. Additional lab time is required. Prerequisites: 113 and permission of instructor. Mr. Munro/Offered every year

286 IBSEN/LECTURE, DISCUSSION
An intensive study of the playwright's major works. Independent research and study is emphasized. Prerequisite: permission of instructor. Mr. Schroeder/Offered periodically

■ SPECIAL OFFERINGS

299 SEC. 1 DIRECTED READING
Staff

299 SEC. 2 DIRECTED RESEARCH
Staff

299 SEC. 3 DIRECTED WRITING
Staff

299 SEC. 4 FIELD PROJECT
Staff

299 SEC. 5 SPECIAL PROJECT
Staff

299 SEC. 6 SPECIAL TOPICS
Staff

299 SEC. 9 INTERNSHIP
Staff

With permission of the program director, the following courses offered by other departments may be taken for theater history and literature credit:

CLASSICS 135 CLASSICAL GREEK TRAGEDY/LECTURE, DISCUSSION
Refer to course listing under Classics.

ENGLISH 120 INTRODUCTION TO SHAKESPEARE/LECTURE
Refer to course listing under English. Ms. Vaughan, Ms. Gertz/Offered every year

ENGLISH 253 ADVANCED STUDIES IN SHAKESPEARE/SEMINAR
Refer to course listing under English. Ms. Vaughan/Offered every year

FRENCH 165 FRENCH DRAMATIC EXPRESSION: PLAY PRODUCTION/ LECTURE, DISCUSSION
Refer to course listing under Foreign Languages and Literatures. Mr. Spingler/Offered every other year

FRENCH 170 THE MODERN FRENCH THEATER: EXPERIMENTS OF THE AVANT-GARDE/LECTURE, DISCUSSION
Refer to course listing under Foreign Languages and Literatures. Mr. Spingler/Offered every other year

GERMAN 166 GERMAN DRAMA FROM LESSING TO BRECHT/ LECTURE, DISCUSSION
Refer to course listing under Foreign Languages and Literatures. Mr. Kaiser/Offered every other year.

CONCENTRATIONS —

Asian Studies

■ PARTICIPATING FACULTY

Paul S. Ropp, Ph.D., program director: Chinese history

Michiko Y. Aoki, Ph.D.: Japanese language, literature, and culture

Cynthia H. Enloe, Ph.D.: Japanese and Southeast Asian politics

Robert C. Hsu, Ph.D.,: Chinese and Japanese economics

Thomas P. Massey, Ph.D.: Chinese history and U.S.-Asian trade

■ ADJUNCT FACULTY

Thomas Gottschang, Ph.D.: Chinese economics (College of the Holy Cross)

Douglas Johnson, Ph.D.: Southwest Asian geography

Mark Lincicome, Ph.D.: Japanese history (College of the Holy Cross)

Ronald K. Richardson, Ph.D.: British India

Claudia Ross, Ph.D.: Chinese language and linguistics (College of the Holy Cross)

Elizabeth Swinton, Ph.D.: Asian art (Worcester Art Museum)

Karen Turner, Ph.D.: Chinese history (College of the Holy Cross)

Alice Valentine, M.A.: Japanese history and culture

■ UNDERGRADUATE PROGRAM

Asian Studies is an interdisciplinary undergraduate program that can be taken as a concentration within a regular major in comparative literature, history, international development, or government. In addition to Asian Studies courses offered at Clark, students may apply to enroll one year abroad at Kansai Gaidai in Japan to study Japanese language and other Japan- and Asia-related fields. Through the Worcester Consortium for Higher Education, students may also take courses in Chinese language and other Asia-related fields at the College of the Holy Cross. With Clark's International Programs Office, students may also arrange to study one year abroad in the People's Republic of China.

The Asian Studies concentration consists of six Asian Studies courses, at least four of which must be nonlanguage courses, including Asian Studies 080, Introduction to Modern Asia, and an Asia-related seminar or independent research project. Students concentrating in Asian Studies are encouraged, though not required, to study one year abroad in Asia and to take at least one year of Chinese or Japanese language.

Students who concentrate in Asian Studies are also encouraged to take courses from the following list of related courses: GEOG 027, Geography of the Third World; GEOG 127, Political Economy of Underdevelopment; GEOG 284, Landscapes of the Middle East; GOVT 117, Revolution and Political Violence; GOVT 222, Strategies of Development and Change in Communist Political Systems; GOVT 261, Women and Militarization in a Comparative Politics Perspective; HIST 090, Twentieth-Century Global History; ID 125, Development Problems; and (depending on the topic) HIST 291, Seminar in Advanced Topics in International Relations. Although theses courses do not carry Asian Studies credit, they deal with Asia and therefore supplement the list of regular Asian Studies courses that follows.

■ COURSES

031 GREAT BOOKS OF CHINA/ LECTURE, DISCUSSION

Refer to course description under History 031. Mr. Ropp/Offered periodically

038 THE UNITED STATES AND VIETNAM/FIRST YEAR SEMINAR

Refer to course description under History 038. Mr. Ropp/Offered periodically

080 INTRODUCTION TO MODERN ASIA/LECTURE

A survey of modern historical trends in India, China, Japan, Southeast Asia, and Korea. Through political biographies, literary selections, and general histories, the course compares native traditions, colonial experiences, and postcolonial developments in Asia since 1800. Mr. Ropp/Offered every other year

084 JAPANESE CIVILIZATION/ LECTURE, DISCUSSION

Refer to course description under History 084. Ms. Aoki/Offered periodically

101-102 ELEMENTARY JAPANESE/ LECTURE, DISCUSSION

Refer to course description under Japanese 101-102. Staff/Offered every year

103-104 INTERMEDIATE JAPANESE/ LECTURE, DISCUSSION

Refer to course description under Japanese 103-104. Staff/Offered every year

105-106 ADVANCED JAPANESE/ LECTURE, DISCUSSION

Refer to course description under Japanese 105-106. Prerequisite: Japanese 104-105 or permission of instructor. Ms. Aoki/Offered every year

161 BRITISH INDIA

Refer to course description under History 161. Mr. Richardson/Offered periodically

177 JAPANESE AND CHINESE ECONOMIES/LECTURE, DISCUSSION

Refer to course description under Economics 177. Mr. Hsu/Offered every other year

181 TRADITIONAL CHINA/ LECTURE, DISCUSSION

Refer to course description under History 181.

Mr. Ropp/Offered every other year

182 MODERN CHINA/ LECTURE, DISCUSSION

Refer to course description under History 182. Mr. Ropp/Offered every other year

184 MODERN JAPAN/ LECTURE, DISCUSSION

Refer to course description under History 184. Staff/Offered periodically

236 POLITICS OF PHILIPPINES AND VIETNAM/LECTURE, DISCUSSION

Refer to course description under Government 236. Ms. Enloe/Offered every other year

255C CHINESE CIVILIZATION AND SOCIETY: SELECTED TOPICS/PROSEMINAR (COPACE-MALA 355C)

An exploration of social, political, and economic themes in Chinese history. Mr. Massey/ Offered every other year

265 POLITICS OF JAPAN/ LECTURE, DISCUSSION

Refer to course description under Government 265. Ms. Enloe/Offered every other year

266 HISTORY OF US-JAPAN TRADE RELATIONS (COPACE)/ LECTURE, DISCUSSION

Surveys the history of U.S.-Japan trade and economic relations from the early 1800s up to the present. Mr. Massey/Offered every other year

279 LATE IMPERIAL CHINA/SEMINAR

Refer to course description under History279. Mr. Massey and Mr. Ropp/Offered periodically

281 THE PEOPLE'S REPUBLIC OF CHINA/LECTURE, DISCUSSION

Refer to course description under History 281. Mr. Ropp/Offered every other year

282 CHINESE WOMEN IN LITERATURE AND SOCIETY/ LECTURE, DISCUSSION

Refer to course description under History 282. Mr. Ropp/Offered every other year

283 JAPANESE CULTURE AND ECONOMIC DEVELOPMENT

Refer to course description under History 283. Ms. Aoki/Offered periodically

284 JAPAN SINCE WORLD WAR II/ LECTURE, DISCUSSION

Refer to course description under History 284. Staff/Offered periodically

285 JAPANESE FOLKLORE/ PROSEMINAR

Refer to course description under History 285. Ms. Aoki/Offered periodically

286 THE VIETNAM WAR/ LECTURE, DISCUSSION

Refer to course description under History 286. Mr. Ropp/Offered periodically

288 SEMINAR IN CHINESE HISTORY

Refer to course description under History 288. Prerequisite: Asian Studies 080 or 181 or 182, or by permission. Mr Ropp/Offered periodically

289 JAPANESE THOUGHT/ PROSEMINAR

Refer to course description under History 289. Prerequisite: History 080 or 084, or by permission of instructor. Ms. Aoki/Offered periodically

296 WOMEN MIRRORED IN EAST AND WEST/SEMINAR

Refer to course description under English 296. Ms. Gertz and Mr. Ropp/Offered periodically

Classics

■ PARTICIPATING FACULTY

Paul F. Burke Jr., Ph.D.: Greek and Latin language and literature, classical mythology, classical art and archaeology, ancient history

Everett Fox, Ph.D.: Jewish ritual and folklore, classical Jewish thought

William A. Koelsch, Ph.D.: themes in classical geographic thought

Rhys F. Townsend, Ph.D.: ancient Greek art and architecture, underwater archaeology, classical tradition in Western art, early Christian and Byzantine art

The Classics Program offers courses in the Classical Greek and Latin languages and, in

English, the culture and history of the Greek- and Latin-speaking peoples of the ancient Mediterranean. Classics courses are recommended to students as part of their general education and to majors in comparative literature, English, foreign languages and literatures, fine arts, history, music, and philosophy. *Although there is no departmental major in classics, students interested in pursuing the study of the ancient Greco-Roman and Judaeo-Christian roots of Western civilization are directed to the interdisciplinary and interdepartmental Program in Ancient Civilization.*

■ COURSES

A. GREEK

101/102 INTRODUCTORY GREEK/LECTURE, DISCUSSION

A beginner's course in the language of Classical Greece. The course covers the grammar and syntax of the ancient Greek language with the goal of enabling students to read, in the second semester, selections from ancient Greek texts. Course readings, in Greek, may include philosophical works such as Plato's Apology of Socrates and Crito, or selections from Homer, Herodotus, and the New Testament, depending on class interests. Indivisible course. Mr. Burke/Offered every year

B. LATIN

101/102 INTRODUCTORY LATIN/LECTURE, DISCUSSION

A beginner's course in the Latin language including, in the first semester, an introduction to the grammar and syntax of Latin with appropriate attention to Latin's role as parent to the Romance languages and source of much of the vocabulary of modern English. The second semester is primarily devoted to reading selections from suitable Latin texts such as the lyric poetry of Catullus or Horace, the historical works of Julius Caesar or Livy, the Vulgate Bible, or selected medieval texts. Indivisible course. Staff/Offered every year

C. CLASSICS COURSES TAUGHT IN ENGLISH

005 ROMANS AND BARBARIANS/LECTURE, DISCUSSION, FIELD TRIPS

A comprehensive survey of the introduction of urbanism to Europe north of the Alps by the Romans, and of the transforming effects of this act upon the society, politics, language, and religion of Western Europe. The course is offered at the Clark European Center in Luxembourg; to the maximum extent possible, instruction takes place on the archaeological sites covered by the course. Student journals take the place of formal examinations. Mr. Burke/Offered every other year

100 ANCIENT GREECE AND PERSEUS 1.0/FIRST-YEAR SEMINAR

A survey of ancient Greek culture, art, archaeology and religion from the Bronze Age to the Hellenistic kingdoms. Students read primary texts in English translation, such as the Homeric epics, selected Greek tragedies and Plato's Apology of Socrates. Extensive use is made of the interactive CD-ROM Perseus system, an electronic, multimedia library of ancient Greek literature, history, art, and archaeology. Members of the class are assigned increasingly complex tasks in connection with the use of the Perseus system. Mr. Burke/ Offered every other year

110 ANCIENT GREEK ART/ LECTURE, DISCUSSION

Refer to course description under Art History 110. Mr. Townsend/Offered every other year

111 ROMAN ART AND ARCHITECTURE/LECTURE, DISCUSSION

A survey of the artistic and architectural accomplishments of ancient Rome and of the many peoples who made up the Roman Empire, beginning with the origins of Rome in Bronze Age central Italy. The course treats Roman relations with Etruscans, Greeks, and other non-Latin-speaking peoples as these interactions manifest themselves in Roman art and architecture. The course concludes with an examination of the effects of Judaeo-Christian values on the formerly pagan Empire, the appearance of a Christian Roman government, and the development of distinctively Christian forms of Roman art and architecture. Mr. Burke/Offered every other year

115 THE TEMPLE BUILDERS: ARCHITECTURE IN ANCIENT GREECE/LECTURE, DISCUSSION

Refer to course description under Art History 215. Mr. Townsend/Offered periodically

123 THE MIDRASHIC TRADITION/ LECTURE, DISCUSSION

Refer to course description under Jewish Studies 123. Mr. Fox/Offered every other year

124 INTRODUCTION TO CLASSICAL MYTHOLOGY/ LECTURE, DISCUSSION

A study of ancient Near Eastern, Greek, and Roman literary texts (along with some modern ones), which are particularly useful for gaining an understanding of the function of myth in Greco-Roman antiquity as a vehicle for artistic communication and social commentary. The archaeological and anthropological background of the ancient world is sketched in, and the religious and philosophical implications of myth are discussed. The course pays particular attention to the influence of ancient mythology on later European culture, especially literature and art. Various modern approaches to myth analysis (structural, psychoanalytical, and literary) are touched upon. Many of the lectures are illustrated by slides. Mr. Burke/Offered every other year

135 CLASSICAL GREEK TRAGEDY/ LECTURE, DISCUSSION

A survey of tragic drama in classical Greece. The course treats the distinctive role of drama in ancient Greek society, staging and production of classical tragedy, and problems of interpreting the texts of plays (in translation) by Aeschylus, Sophocles, and Euripides. The course also pays appropriate attention to mythology as the primary subject of Greek tragedy. One mid-term, one term paper, final examination. Mr. Burke/Offered every other year

157 THE AGE OF NERO/ LECTURE, DISCUSSION

A close study of the first century of Roman Imperial society with particular attention to the reign of the emperor Nero (A.D. 54-68). The course emphasizes the historical and social results of the consolidation, during the first century A.D., to totalitarian rule in Rome, a form of government that would dominate the Mediterranean world and most of Europe for four centuries. The age of Nero was also a period of almost unprecedented creativity in the arts; therefore, students also learn—through the study of Neronian art, architecture, and literature—about the development of a distinctive Imperial idiom in these fields. Mr. Burke/Offered every other year

174 GREEKS AND BARBARIANS IN THE ANCIENT ECUMENE/LECTURE, DISCUSSION

Refer to course description under Geography 174. Mr. Koelsch/Offered every year

262 JEWS AND CHRISTIANS IN THE ANCIENT WORLD/LECTURE, DISCUSSION

A historical and cultural survey of the complex and tumultuous period between the foundation of the Roman Empire and the sixth century A.D., when medieval culture was established in Europe. Two themes dominate the course: (1) the struggle between pagan or classical modes of thought and Judaeo-Christian beliefs and values, and the assimilation of each in the other; (2) the tension within the Christian movement between spiritual and practical concerns as the new religion came to dominate Western culture. The interaction of Greco-Roman, Jewish, and Christian cultures is approached by reading ancient authors in translation, by studying appropriate secondary sources, and by examining representative samples of the visual arts of the period in lectures illustrated by slides. Mr. Burke/Offered every other year

267 RELIGIOUS EXPERIENCE IN THE ANCIENT WORLD/LECTURE, DISCUSSION

A study of the range and variety of religious experience available to the peoples of the ancient Mediterranean from approximately the time of Homer to the official acceptance of Christianity by the Roman Imperial government. Problems to be studied include: the nature of the polytheist gods, prophecy and oracles, conversion and the spread of religious belief, Jewish and Christian monotheism, the problem of evil in ancient religious thought, and the rise of Christianity. Students will read primary texts in translation such as: Hesiod's Theogony, selected Greek tragedies, the appropriate Jewish and Christian Biblical texts. Mr. Burke/Offered every other year

282 NATURE AND CULTURE IN THE ANCIENT WORLD/DISCUSSION

Refer to course description under Geography 283. Mr. Koelsch/Offered every other year

Communication Studies

■ PRINCIPAL ADVISORS

Michael Bamberg, Ph.D., Psychology: first and second language acquisition, narratives, discourse analysis, cross-linguistic/cross-cultural comparison

Charles S. Blinderman, Ph.D., English: science and literature, Victorian literature, etymology

Sarah Buie, M.F.A., Visual and Performing Arts: graphic design, museum design and interpretation

Marcia Butzel, Ph.D., Foreign Languages and Literatures: French and Italian, cultural studies, French narrative

James P. Gee, Ph.D., Education: fundamentals of language in education, urban schooling, theory and practice, schools as institutions that learn, science and society, discourses of history

Serena S. Hilsinger, Ph.D., English: modernist literature, women writers

Fern Johnson, Ph.D., English: sociolinguistics, feminist linguistics, communication

James V. Wertsch, Psychology: sociocultural approaches to mind, language, and thought; socialization of cognition and values; cultural identity in the context of globalization

Paul Wilkes, M.S., English: print media, documentary film

Communication Studies at Clark University is an interdisciplinary program through which students can take courses and complete a concentration to complement a major in another field of study. Communication courses are offered in a number of departments and are often cross-listed to reflect the interdisciplinary focus of the program.

The study of communication focuses on analysis and understanding of symbols. Communication is viewed as a fundamental form of social action, centered in the human ability to create and understand verbal and visual symbols. Courses are available which treat a range of communication contexts, from personal and private to mediated and public.

The communication studies concentration is available in three different emphasis areas and requires the completion of six courses (including the core course) plus a directed project or an approved internship. An interdisciplinary faculty committee guides the work of students. The three emphasis areas and faculty advisors in each are:

- Writing—Professors Blinderman, Hilsinger, and Wilkes
- Visual Communication—Professors Butzel and Buie
- Language, Communication, and Identity—Professors Gee, Johnson, and Wertsch

REQUIREMENTS

All students fulfilling the communication studies concentration complete:

1. Communication 190, Communication, Culture and Society
2. Communication 299 Sec. 9, Internship or Special Project
3. Sample courses in emphasis areas.

COURSES

190 COMMUNICATION, CULTURE, AND SOCIETY

A core course rather than a survey or introduction, this course focuses on concepts and ideas from several disciplines that contribute to the intellectual foundations of the communication field. Permission of the instructor is required. Staff/Offered every year

299 SEC. 9 INTERNSHIP OR SPECIAL PROJECT

Staff/Offered every year

COURSES RELEVANT TO THE COMMUNICATION STUDIES CONCENTRATION

Writing Emphasis

Courses in the study of language and communication:

191 LANGUAGE DIVERSITY IN THE UNITED STATES

Refer to course description under English 191. Ms. Johnson/Offered every year

192 ETYMOLOGY

Refer to course description under English 192. Mr. Blinderman/Offered every year

193 THE LANGUAGE OF BIOLOGY

Refer to course description under English 193. Mr. Blinderman/Offered every year

194 LANGUAGE, EMOTIONS, THOUGHT, AND CULTURE

Refer to course description under Psychology 160. Mr. Bamberg, Ms. Budwig/Offered periodically

242 PSYCHOLOGY OF LANGUAGE

Refer to course description under Psychology 242. Mr. Kaplan/Offered periodically

249 SIGNS AND CROSSROADS: SEMIOTIC THEORY AND PRACTICE

Refer to course description under English 249. Ms. Gertz/Offered periodically

251 MEDIA AND SOCIETY

Refer to course description under Sociology 251. Staff/Offered periodically

283 PHILOSOPHY OF LANGUAGE

Refer to course description under Philosophy 242. Ms. Herzog/Offered periodically

291 GENDER IN LANGUAGE USE

Refer to course description under English 291. Ms. Johnson/Offered periodically

294 THE HISTORY OF THE ENGLISH LANGUAGE

Refer to course description under English 294. Ms. Gertz/Offered periodically

Courses in writing:

019 THE ESSAY: READING AND WRITING

Refer to course description under English 019. Ms. Scanlon/Offered every year

106 CREATIVE WRITING: FICTION

Refer to course description under English 106. Staff/Offered every year

107 CREATIVE WRITING: POETRY

Refer to course description under English 107. Staff/Offered every year

109 SCIENCE AND SOCIETY WRITING SEMINAR

Refer to course description under Environmental Science and Policy 109. Mr. Goble/Offered periodically

195 DOCUMENTARY FILM

Refer to course description under English 195. Mr. Wilkes/Offered periodically

199 THE WRITER'S CRAFT

Refer to course description under Theater Arts 199. Mr. Brooks/Offered every other year

202 WRITING FOR MAGAZINES I

Refer to course description under English 202. Mr. Wilkes/Offered every year

203 WRITING FOR MAGAZINES II

Refer to course description under English 203. Mr. Wilkes/Offered every year

Visual Communication Emphasis
Courses in film and television:

101 INTRODUCTION TO SCREEN STUDIES

Refer to course description under Screen Studies 101. Mr. Benelli/Offered every semester

120 HISTORY OF AMERICAN NARRATIVE FILM

Refer to course description under Screen Studies 120. Mr. Benelli/Offered every other year

122 HISTORY OF BROADCASTING AND TELEVISION

Refer to course description under Screen Studies 122. Mr. Benelli/Offered every other year

123 FACTUAL FILM AND TELEVISION

Refer to course description under Screen Studies 123. Mr. Benelli/Offered every other year

184 FILM AS NARRATION

Refer to course description under Screen Studies 184. Ms. Butzel/Offered every other year

191 STUDIES IN COMPARATIVE CULTURE: FRENCH VS. AMERICAN TELEVISION

Refer to course description under Comparative Literature 191. Ms. Butzel/Offered ever year

195 DOCUMENTARY FILM

Refer to course description under English 195. Mr. Wilkes/Offered every year

231 FILM THEORY

Refer to course description under Screen Studies 231. Mr. Benelli/Offered every year

251 MEDIA AND SOCIETY

Refer to course description under Sociology 251. Staff/Offered periodically

299 GENDER AND FILM

Refer to course description under Screen Studies 299. Ms. Butzel/Offered every other year

Courses in graphic design and photography:

100 VISUAL STUDIES—DESIGN

Refer to course description under Studio Art 100. Mr. Krueger, Mr. Hachey/Offered every year

120 INTRODUCTION TO PHOTOGRAPHY: ZONE SYSTEM

Refer to course description under Studio Art 120. Mr. Rosenstock, Mr. DiRado/Offered every semester

121 INTERMEDIATE PHOTOGRAPHY

Refer to course description under Studio Art 121. Mr. Rosenstock, Mr. DiRado/Offered every year

124 INTRODUCTION TO GRAPHIC DESIGN

Refer to course description under Studio Art 124. Ms. Buie/Offered every year

125 GRAPHIC DESIGN PROJECTS

Refer to course description under Studio Art 125. Ms. Buie, Ms. Bodenweber/Offered every year

171 VIDEO PRODUCTION PROJECTS

Refer to course description under Studio Art 171. Mr. Simon/Offered every year

200 PHOTOGRAPHY PROJECTS

Refer to course description under Studio Art 200. Mr. Rosenstock, Mr. DiRado/Offered every year

208 TYPOGRAPHY

Refer to course description under Studio Art 208. Ms. Buie/Offered every year.

252 PHOTOGRAPHY STUDIO

Refer to course description under Studio Art 250. Staff/Offered every year

254 GRAPHIC DESIGN STUDIO

Refer to course description under Studio Art 254. Ms. Buie/Offered every year

262 ILLUSTRATION STUDIO

Refer to course description under Studio Art 262. Mr. Krueger/Offered every other year

278 VIDEO PRODUCTION STUDIO

Refer to course description under Studio Art 278. Mr. Simon/Offered every year

Courses in theater arts:

110 HOW DOES A PLAY WORK? CRITICAL ANALYSIS AND WRITING

Refer to course description under Theater Arts 110. Mr. Schroeder/Offered every year

111 VOICE AND DICTION

Refer to course description under Theater Arts 111. Mr. Schroeder/Offered every year

112 THE CREATIVE ACTOR

Refer to course description under Theater Arts 112. Mr. Munro, Mr. DiIorio/Offered every semester

113 ACTOR AS THINKER

Refer to course description under Theater Arts 113. Mr. Munro/Offered every semester

114 TECHNICAL THEATER

Refer to course description under Theater Arts 120. Ms. Kurki/Offered every semester

126 ENVIRONMENTAL STUDIO

Refer to course description under Theater Arts 126. Ms. Kurki/Offered every other year

Language, Communication, and Identity Emphasis
Introductory courses:

017 INTRODUCTION TO CULTURAL GEOGRAPHY

Refer to course description under Geography 017. Mr. Johnson/Offered every year

110 SOCIOLOGY OF GENDER

Refer to course description under Sociology 110. Ms. Ewick, Staff/Offered every year

120 INTRODUCTION TO SOCIAL ANTHROPOLOGY

Refer to course description under International Development 120. Mr. Jones/Offered every year Ms. Grad, Mr. Renn/Offered occasionally

160 LANGUAGE, EMOTIONS, THOUGHT, AND CULTURE

Refer to course description under Psychology 160. Mr. Bamberg, Ms. Budwig/Offered periodically

Courses in language, semiotics, symbolism, and ideology:

191 LANGUAGE DIVERSITY IN THE UNITED STATES

Refer to course description under English 191. Ms. Johnson/Offered every year

192 ETYMOLOGY

Refer to course description under English 192. Mr. Blinderman, Offered every year

249 SIGNS AND CROSSROADS: SEMIOTIC THEORY AND PRACTICE

Refer to course description under English 249. Ms. Gertz/Offered periodically

251 LANGUAGE DEVELOPMENT

Refer to course description under Psychology 251. Mr. Bamberg, Ms. Budwig/Offered every year

252 NARRATIVE DISCOURSE

Refer to course description under Psychology 253. Staff/Offered every year

260 LITERACY DEVELOPMENT

Refer to course description under Education 260. Mr. Dickinson/Offered every year

262 COMMUNICATION: VERBAL AND NONVERBAL

Refer to course description under Psychology 262. Mr. Wiener/Offered periodically

268 COMMUNICATIVE DEVELOPMENT

Refer to course description under Psychology 268 Ms. Budwig/Offered periodically

276 SYMBOLISM IN EVERYDAY LIFE: MYTH, DREAM, AND SYMBOL

Refer to course description under Psychology 276. Mr. Kaplan/Offered periodically

Courses in communication and culture:

136 STUDIES IN FRENCH CULTURE

Refer to course description under French 136. Mr. Spingler, Ms. Kaufmann/Offered every year

146 INTRODUCTION TO CINEMA IN SPAIN

Refer to course description under Spanish 146. Mr. D'Lugo/Offered every other year

148 INTRODUCTION TO CINEMA IN LATIN AMERICA

Refer to course description under Spanish 148. Mr. D'Lugo/Offered every other year

150 THE NEW GERMAN CINEMA

Refer to course description under German 150. Mr. Schatzberg/Offered every other year

170 URBAN SOCIAL GEOGRAPHY

Refer to course description under Geography 170. Ms. Hanson/Offered every year

191 FRENCH VERSUS AMERICAN TELEVISION

Refer to course description under French 191. Ms. Butzel/Offered every other year

213 GENDER AND THE CITY IN THE U.S.

Refer to course description under History 213. Ms. Deutsch/Offered periodically

219 HISTORY OF AMERICAN WOMEN

Refer to course description under History 219. Ms. Deutsch/Offered every year

251 MEDIA AND SOCIETY

Refer to course description under Sociology 251. Staff/Offered periodically

275 LANGUAGES OF INDIVIDUALISM AND COLLECTIVISM

Refer to course description under Psychology 275. Mr. Wertsch/Offered periodically

286 CROSS-CULTURAL PERSPECTIVES ON HUMAN DEVELOPMENT

Refer to course description under Psychology 286 Ms. Uzgiris/Offered every other year

289 MIND IN SOCIO-CULTURAL CONTEXT

Refer to course description under Psychology 289. Mr. Wertsch/Offered every year

Cultural Identity and Global Processes

PROGRAM FACULTY

Parminder Bhachu, Ph.D., Program director, Henry R. Luce Professor of Cultural Identity and Global Processes: construction of identities and ethnicities, immigration diasporas, women and wage labor markets, nationalist churches and global processes

Luce Faculty Committee Members

Nancy Budwig, María Acosta Cruz, Cynthia Enloe, James Gee, Susan Hanson, Sharon Krefetz, Virginia Vaughan, Robert Vitalis, James Wertsch

PROGRAM

The Henry R. Luce Professorship and Program on Cultural Identity and Global Processes are interdisciplinary and explores an emerging paradox of international importance. The dramatic growth in transnational and global phenomena has led to the existence of a global community which has significantly contributed to the demise of the nation-state. Yet, at the same time there is a resurgence of cultural identities in both regional and local contexts. Currently, this paradox takes on special urgency because never before have both communities and international structures had available such powerful tools for persuasion and coercion. These tools are altering the ways that groups interact with each other, with the state, and with the international community.

The Luce program's perspective is that identities are socially constructed and negotiated in historical and geographical contexts. In recent times these cultural identities have emerged and interacted in new ways in response to global processes. The Luce program explores ideas of cultural diversity by incorporating the study of such social/cultural processes into an interdisciplinary teaching format. The examination of this topic from an interdisciplinary perspective, a major strength of Clark scholars, is critical to our understanding of a rapidly changing world, especially as it stands at the brink of a new global reality.

The Luce Professor and Program are continually involved in innovative undergraduate curriculum revisions. The program regularly initiates entirely new courses and organizes symposia and workshops on critical and globally relevant themes, featuring both national and international scholars. Since its inauguration in September 1992, the Henry R. Luce Lecture Series has presented some of the most eminent and world-renowned scholars in this field. In addition to the presentation of the official Luce lectures, a number of undergraduate and graduate activities and events related to Cultural Identities and Global Processes are organized with and around each speaker to expose undergraduates to innovative conceptual ideas and models.

The Undergraduate Concentration in Cultural Identities and Global Processes was established in September 1993. The courses carefully selected for the concentration meet some of the specifically central course criteria (described below) of the Luce professorship and program.

Henry R. Luce Undergraduate Concentration on Cultural Identity and Global Processes

The Cultural Identities and Global Processes Concentration for undergraduates requires students to take six courses that build skills from an introductory to a sophisticated level.

Criteria used by the Luce Professorship Committee to select and develop future CIGP courses:

1) A course must explicitly analyze the construction of "cultures."
2) A course must also self-consciously teach students to explore when and how people's acquisition of local identities are shaped in part by processes that seem far larger, extending beyond the borders of particular societies.
3) A course must simultaneously develop skills for analyzing when and how these seemingly potent "global processes" (arms sales, the "world car," the "world movie," acid rain, internationally popular consumer trends and music styles) are shaped by local cultural interactions.
4) A CIGP course must be more than simply a cross-national comparative course (e.g., "The Politics of the Philippines and Vietnam" would not a priori qualify) and more than simply a course focused on a non-U.S. culture (e.g., "The Politics of Japan" would not a priori qualify).

Using these guidelines, the CIGP concentration follows the curriculum outlined below, progressing from an introductory course (CIGP 161) to a capstone seminar (this can be fulfilled with either CIGP 275 or CIGP 278).

Requirements for the Luce Concentration

As stated above, the Luce-CIGP undergraduate concentration requires students to take six courses, two of which must be specifically CIGP courses, selected from the CIGP section below. The introductory course (CIGP 161) is mandatory and the second course can be selected from the CIGP capstone seminar courses listed below.

In addition, students are required to take four other courses, to be chosen by them from the courses cross-listed below, two of which must be at the 200 level. These courses are intermediate in analytical sophistication. Each of these courses fulfills the special CIGP criteria but allows a CIGP concentrator to select a particular focus for attention. We expect students to take the 200 level CIGP courses after taking the mandatory introductory CIGP 161 course.

Each student concentrator will select a CIGP faculty advisor from among the CIGP faculty committee. This advisor will help ensure that each student's intermediate courses provides intellectual coherence.

CIGP courses - Two out of this list are required courses

CIGP161 Cultural Identities and Global Processes (mandatory introductory course)

CIGP 275 Culture, Consumption, and Class in Local and Global Contexts (one of two possible mandatory capstone seminars—maximum 18 students) CIGP 278 The Creation of Nationalisms, Nationalist Cultures, and Symbols (one of two possible mandatory capstone seminars—maximum 18 students)

*Four additional courses from the list below are required; two must be at the 200 level (See ** reminder below)*

■ CIGP

271 RACE, MIGRATION, GENDER, AND ETHNICITY EDUCATION

295 LITERACY, SCHOOLS, AND SOCIAL COGNITION (PART 1)

278 SCIENCE AND SOCIETY

Foreign Languages and Literatures

FRENCH 158 THE FRENCH-SPEAKING WORLD

SPANISH 143 LATIN AMERICAN ESSAY AND THOUGHT

SPANISH 207 FIELD WORK IN THE HISPANIC COMMUNITY

Geography

117 CULTURE LANDSCAPE

127 POLITICAL ECONOMY OF UNDERDEVELOPMENT

170 DIVIDED CITIES, CONNECTED LIVES

179 PEOPLE, ECOLOGY AND GLOBAL VILLAGE

Government

070 INTRODUCTION TO COMPARATIVE POLITICS

228 COMPARATIVE POLITICS OF RACE, ETHNICITY, AND GENDER HISTORY

268 FOREIGNERS PERCEIVED: INTERCULTURAL RELATIONS THROUGH TRAVEL WRITINGS/PROSEMINAR

284 CULTURAL IDENTITY AND THE NATION STATE/SEMINAR

260 NATIONALISM AND GLOBAL INTERDEPENDENCE

266 HISTORICAL IDENTITIES

205 HISTORY OF THE AMERICAN WEST

124 ETHNICITY AND NATIONALISM IN MODERN EUROPE IN COMPARATIVE PERSPECTIVE

International Development

050 LOCAL ACTION: GLOBAL CHANGE

270 ETHNICITY AND SOCIAL DIFFERENCES

212 WOMEN AND SOCIAL CHANGE/SEMINAR

Psychology

160 LANGUAGE, EMOTION, THOUGHT AND CULTURE

265 CULTURAL IDENTITY AND THE NATION-STATE

Sociology

204 THE HOLOCAUST: A STUDY OF GENOCIDE

** Reminder: Each of the above courses has been specifically and carefully selected by faculty on the CIGP committee to fulfill this program's four very particular analytical criteria: that is, it must be explicit in its investigation of the construction of cultures, but beyond that it must not only compare cultures; it must also analyze the ways in which cultures are internationally transmitted and negotiated.

■ COURSES

All the following courses require some social sciences/humanities background. Preference will be given to students who have already taken or are in the process of taking courses in government, cultural geography, women's studies, sociology, history, or other social science or humanities areas.

161 CULTURAL IDENTITIES AND GLOBAL PROCESSES

This course explores the impact of local, national, and international forces on the formation of cultural identities at a time of rapid and dramatic social changes in the 1990s. It focuses on contemporary urban cultures, to examine local cultural styles and identities and also national identities as they are globally determined, as well as locally interpreted through the codes and values of local subcultures. Regional, national, and international political forces have as much of an impact on "American" cultures as they do on a vast majority of cultures internationally. This course emphasizes the elastic and the plastic nature of cultures and identities, and the importance of time, place, and space as a means of understanding the emergence of new class and cultural styles and identities in the increasingly culturally diverse setting of the 1990s. It points to the complex nature of social and cultural change, which continuously shapes and reshapes minority and majority cultures in the context of local, national, and global economic and political processes. Ms. Bhachu/Offered every year

271 RACE, MIGRATION, GENDER, AND ETHNICITY

This course examines the impact of migration on ethnicity, especially as explored from the perspectives of gender and race. Migration patterns of migrants as well as settlers are studied to point to the complex nature of migration and settlement. The course focuses on the impact of the economic on the cultural, as examined through the impact of migration and women's engagement in the wage-labor market. Changes in the sexual division of labor within the household and the emergence of new cultural patterns for women in different economic locations, especially in Europe and the U.S., are explored. Emphasis is placed on the importance of class, ethnicity, and race in the formation of "ethnic cultures," especially as they respond to continuously changing and culturally diverse settings. A central theme of discussion is the formation of ethnic identities as they are influenced by, and filtered through, local and national economic and political forces. Ms. Bhachu/Offered in alternate years.

CIGP 275 CULTURE, CONSUMPTION AND CLASS IN LOCAL AND GLOBAL CONTEXTS

The course focuses on consumption as it is culturally and ethnically determined, gendered, classed, and impacted upon politically, both by individual consumers and capitalist producers. It emphasizes the ways in which people and groups define themselves and manufacture identities through the use of distinctive symbols of consumption and consumer products. The focus of the course is on the prime actors of consumption—the consumers, both male and female—and who consumes what in specific contexts. Consumption and consumer cultures and commodities will be examined as they are locally, regionally, and nationally determined through the codes of class, ethnicity, and gender. The ways in which consumption is linked to identity values will be explored, as it is both determined by and also determines the construction of identities. A central theme is the interplay between the forces of the world market and cultural identities, between local and global processes, and between consumption and cultural strategies to discover the consumer subcultures that are dynamically and continuously innovated in local contexts. To capture and understand these trends, students will be required to conduct a small ethnographic project on consumer pattern, product, or culture. Ms. Bhachu/Offered in alternate years.

278 THE CREATION OF NATIONALISMS, NATIONALIST CULTURES AND SYMBOLS

At a time of rapid global changes and globalization, nationalisms and nationalist cultures have grown dramatically in the 1990s. This course explores the symbols and cultural values that are activated and highlighted to create and define nationalist cultures. Which "imagined communities," "invented traditions," and "symbolic economies" are generated to operationalize nationalist cultures? What is the material culture that defines nationalist movements? What are the key consumer commodities, cultural symbols, and language and dress codes, that are invested with heightened significance and give meaning to nationalist cultures? What is the role of gender in creating nationalist cultures? Are there gendered cultures that define nationalisms differently? Why and how? Are women more nationalistic than men? How are cultural resources mobilized to both activate and also deactivate nation-state hegemonies and the force of nationalisms? This course, by focusing on the culture and the cultural symbols of nationalisms, explores their importance in both the generation of strategic nationalist identities and examines the cultures of nationalist resistance that may already be inherent in the creation of nationalist trends. Ms. Bhachu/Offered in alternate years.

Environmental Studies

■ PARTICIPATING FACULTY

Jacque Emel, Ph.D., coordinator: resource management, political geography, hydrology

S. Leslie Blatt, Ph.D., experimental nuclear physics

Halina Brown, Ph.D., chemistry, toxicology, risk analysis and management, public health policy

Brian Cook, Ph.D., public policy, public administration, bureaucratic politics

Young Sook Eom, Ph.D., environmental economics

Robert Goble, Ph.D., technology assessment, atmospheric physics and turbulence

Stanley Herwitz, Ph.D., biogeography, hydrology, watershed ecology

H. William Johansen, Ph.D., psychology, marine biology

Douglas Johnson, Ph.D., cultural ecology, arid lands management

Roger Kasperson, Ph.D., hazards, global change, environment and society

William Koelsch, Ph.D., history of geography, American thought and culture, ancient Mediterranean world

Laurence A. Lewis, Ph.D., geomorphology, tropical agriculture and environment

Stuart Licht, Ph.D., physical chemistry, environmental chemistry

Todd Livdahl, Ph.D., population biology, community ecology, evolution, biostatistics

Bruce London, Ph.D., technology and society, sociology of the Third World, social demography

Robert Cameron Mitchell, Ph.D., environment and society, risk perception, survey research methodology

Samuel Ratick, Ph.D., environmental modeling, transportation logistics and planning, location choice, impact analysis

Diane Rocheleau, Ph.D., human/political/systems ecology, Third World forestry and agriculture

Barbara Thomas-Slayter, Ph.D., local institutions and organizations, women and public policy, peasant behavior

B.L. Turner, Ph.D., cultural/human ecology, global change, Third World agriculture

■ UNDERGRADUATE PROGRAM

The Environmental Studies concentration can be taken in conjunction with a major in almost any program or department at Clark. The Concentration in Environmental Studies involves faculty from many of the University's divisions, but it is concentrated in the physical/life sciences and social sciences. This concentration is particularly recommended to students who have a special interest in environmental issues and seek to develop a basic competence in this area that can enhance their subsequent professional education.

■ CONCENTRATION REQUIREMENTS

The requirements for a concentration in environmental studies are designed to familiarize the student with the basic concepts that underlie environmental issues, to introduce the theoretical, methodological, and practical questions posed by environmental problems, and to ensure that the student engages in sustained analysis of important environmental issues at both an introductory and an advanced level.

At a minimum, the concentration in environmental studies requires six courses, distributed in the following manner:

1. One introductory course, either:

ENV 101/Geog 101, Introductory Case Studies or
ENV 102/Geog 019, Introduction to the Global Environment

2. Two lower-division courses

At least one course focused on the physical/life sciences.

BIO 103, Biogeography
BIO 114, Marine Biology
CHEM 142/ENV 142, Environmental Chemistry
ENV 115/GEOG 115, Hydrology
GEOL 118/GEOG 118, Environmental Geology

At least one course focused on the social sciences or humanities

*ENV 103/GEOG 176, Environment 199_*
GEOG 108, World Population
ECON 155, Environmental Economics
ENV 124/GEOG 124, Economy and Environment
ENV 157/GEOG 157, Technology and Social Change
GOVT 157, The Politics of Environmental Issues
GEOG 179, International Political Economy

3. Two upper division courses

One or two courses focused on the physical/life sciences.

BIO 204, Watershed Ecology
BIO 216, Ecology

GEOG 213, Forest Hydrology Field Methods
GEOG 271, Groundwater Hydrology and Management
GEOG 218/ID 218, Physical Environment and Development
BIO 241, Risk Assessment in Environmental Toxicology

One or two courses focused on the social sciences or humanities.

ENV 226/GEOG 226, Environmental Hazards
ECON 257, Resource Economics
ENV 210/GEOG 210, Environment and Society
GEOG 228/ID 229, Management of Arid Lands
ENV 251, Limits of the Earth
GEOG 236/ID 236, International Comparative Resource Policies
GEOG 281, Tropical Ecology
GEOG 283, Nature and Culture in the Ancient World
SOC 205, Sociology of the Environment

4. One course that serves as an integrating capstone experience, either independent research or an internship or seminar with a research component. No directed readings are acceptable.

Seminars that can be used to fulfill this requirement are:

BIO 204/GEOG 204, Watershed Ecology
GEOG 218/ID 218, Seminar in Physical Environment and Development
ENV 226/GEOG 226, Environmental Hazards
GEOG 236/ID 236, International Comparative Resource Policies

■ COURSES

See participating departments for appropriate listings.

Ethics and Public Policy

■ PARTICIPATING FACULTY

Patrick G. Derr, Ph.D., program director: philosophy of science, biomedical ethics, ethical issues in hazards management

Marguerette Arndt, Ph.D., health policy

John Brink, Ph.D., pharmacology, health policy

John Blydenburgh, Ph.D., game theory, policy analysis, public opinion research

Robert Bradbury, Ph.D., health policy

Halina Brown, Ph.D., risk analysis and management, public health policy

Brian Cook, Ph.D., public policy, environmental policy

Judith W. DeCew, Ph.D.: philosophy of law, social and political philosophy, ethics

Cynthia Enloe, Ph.D., women and politics, military policy, ethnic and racial politics

Pius Eze, Ph.D., health economics, health policy

Everett Fox, Ph.D., Jewish ethics

Susan Hanson, Ph.D., transportation policy

Douglas Johnson, Ph.D., land management policy

Roger Kasperson, Ph.D., environmental policy, risk analysis and management

Sharon Krefetz, Ph.D., research methods, public policy and the city

Attiatt Ott, Ph.D., health economics, health policy

Edward Ottensmeyer, Ph.D., Associate Professor of Management: business ethics

Gary E. Overvold, Ph.D.: interdisciplinary studies, cultural history

Michael Pakaluk, Ph.D.: philosophy of love and friendship

Frank Puffer, Ph.D., health economics, health policy

Robert Ross, Ph.D., Social planning and social policy

Christina Sommers, Ph.D.: ethics, feminist philosophy, contemporary moral theory

Stefan Tanaka, Ph.D., nuclear weapons policy

Sydney Thomas, Ph.D.: feminist philosophy, history of American philosophy

B. L. Turner, Ph.D., population policy

Maurice Weinrobe, Ph.D., housing economics, housing policy

Walter E. Wright, Ph.D.: ethics

■ AFFILIATE FACULTY

Nathaniel Seale, M.Ed., education and social policy

■ UNDERGRADUATE PROGRAM

The Ethics and Public Policy concentration can be taken in conjunction with a major in almost any other program or department at Clark. The Concentration in Ethics and Public Policy is administered by the Philosophy department, but involves faculty from all the University's divisions and nearly all of its departments. This concentration is particularly recommended to students who intend to pursue professional or career interests in policy-related fields such as law, government, public administration, or health care.

■ CONCENTRATION REQUIREMENTS

The requirements for a concentration in ethics and public policy are designed to familiarize the student with the basic concepts and methods of both ethical analysis and policy analysis; to introduce the theoretical and methodological problems of both ethical analysis and policy analysis; and to ensure that the student engages in sustained analysis of particular ethical and public policy issues at both an introductory and an advanced level.

At a minimum, the concentration in ethics and public policy requires six courses, distributed in the following manner:

1. Two required courses in ethics

At least one introductory course focused on the basic concepts and methods of ethical analysis. For example:

PHIL 105, Personal Values
PHIL 132, Social and Political Ethics
HEBR 127, Modern Jewish Ethics

At least one advanced course focused on theoretical and methodological problems of ethical analysis. For example:

PHIL 220, History of Ethics
PHIL 221, Social and Political Philosophy
PHIL 228, Contemporary Moral Theory

2. Two Required courses in Public Policy Analysis

At least one introductory course focused on the basic concepts and methods of policy analysis. For example:

ENV 101, Introductory Case Studies
GEOG 101, Introductory Case Studies
GOVT 107, Research Methods

At least one advanced course focused on theoretical and methodological problems of policy analysis. For example:

ENV 175, Science, Decision Making, and Uncertainty
ENV 250, Technology Assessment
ENV 265, Quantitative Methods in Risk Analysis
ENV 270, Decision Analysis for Environmental Management
GEOG 246, Technology Assessment
GEOG 266, Quantitative Methods in Risk Analysis
GOVT 203, Applications of Game Theory
GOVT 213, Policy Analysis

3. Two Required courses on applications and problems

At least one introductory course focused on particular ethical and public policy issues. For example:

ECON 125, Health Economics
EDUC 155, Education and Social Policy
ENV 120, The Nuclear Age
ENV 130, Energy Systems
ENV 160, Conflict Resolution
GEOG 105, The Keeping of Animals: Patterns of Use and Abuse
GEOG 125, Development Problems
GOVT 154, The Politics of Public Policy
GOVT 157, The Politics of Environmental Issues
GOVT 173, Politics of War and Peace
IDSC 108, World Population
MGMT 262, Business Ethics
PHIL 130, Medical Ethics
PHIL 133, Business Ethics
PHIL 136, Legal Ethics
PSTD 160, Conflict Resolution
SOC 246, Social Planning and Social Policy

At least one advanced course devoted to the intensive analysis of particular ethical and public policy issues. For example:

BIOL 232, Topics in Microbiology & Public Health
BIOL 238, Issues in Public Health
BIOL 241, Risk Assessment in Environmental Toxicology
ECON 216, Tax Systems and Policies
ECON 235, Economics of Housing
ENV 182, People, Politics, and Pollution
ENV 210, Environment and Society
ENV 226, Environmental Hazards: Theory, Models & Applications
ENV 252, Locating Hazardous Facilities
ENV 246, Cancer: Science and Society
GEOG 182, People, Politics, and Pollution
GEOG 210, Environment and Society
GEOG 226, Environmental Hazards: Theory, Models & Applications
GEOG 252, Locating Hazardous Facilities
GEOG 254, Urban Transportation: Problems and Prospects
GEOG 293, Overcoming World Hunger
GOVT 221, Public Policies and American Cities
GOVT 223, Suburban Policy Issues
GOVT 250, National Security Policy Making in the U.S.
GOVT 282, Housing Policies
HIST 233, Seminar on Arms Control
HIST 288, Proseminar: The Atom Bomb
IDSC 232, Social Justice and Development
IDSC 288, Disease and Health Services in the Third World
IDSC 293, Overcoming World hunger
PSTD 234, Seminar: Arms Control
PSTD 288, Proseminar: The Atom Bomb
PHIL 270, Philosophy of Law
PHIL 272, Advanced Issues in Medical Ethics
PHIL 273, AIDS: Ethics and Public Policy

■ DIRECTED READINGS, INDIVIDUAL RESEARCH

Students who are motivated to undertake significant independent research should consult the individual faculty member with whom they wish to work regarding opportunities for Research Apprenticeships, Directed Research, or Directed Readings.

■ INTERNSHIPS

Participating faculty sponsor a variety of undergraduate internship experiences, often with policy-making professionals or agencies with whom they have a consulting or research relationship. Students interested in these opportunities should inquire through the internship office.

■ COURSES

See participating departments for appropriate listings.

International Relations

■ PARTICIPATING FACULTY

Douglas Little, Ph.D., program director: U.S. foreign policy, modern Latin America

Daniel Borg, Ph.D.: modern Europe

Cynthia Enloe, Ph.D.: modern Asia, militarization

Beverly Grier, Ph.D.: modern Africa

Robert Hsu, Ph.D.: international economics, economic development

George Lane, M.A.: U.S. foreign policy, modern Middle East

Paul Lucas, Ph.D.: early modern Europe

Ronald Richardson, Ph.D.: modern Europe, British Empire

Paul Ropp, Ph.D.: modern Asia, China

Robert Ross, Ph.D.: international political economy, urban studies

Zenovia Sochor, Ph.D.: Soviet Union, comparative foreign policy

Roger Van Tassel, Ph.D.: international economics

Robert Vitalis, Ph.D.: international relations; Middle East politics

■ INTERNATIONAL RELATIONS CONCENTRATION

Clark's International Relations Program constitutes neither a department nor a major, but rather a concentration within two existing majors: history and government. Recent developments in world affairs have broken down the old disciplinary boundaries between diplomatic history and international relations, making an interdisciplinary approach essential. The international relations concentration consists of a series of seven interrelated courses, designed to provide an integrated framework for understanding international affairs from historical, political, and economic perspectives.

Requirements

A. A student wishing to pursue a concentration in international relations must take a core cluster consisting of three courses.

Core Cluster:

1. Economics 108, International Financial Developments

2. Government 169/History 169, Introduction to International Relations

3. History 238, U.S. Foreign Relations since 1914

B. In addition, international relations concentrators must choose one of the following analytic clusters: World Economics, Comparative Diplomacy, or Self-Designed Area Studies.

International Political Economy Cluster (choose three of the following six courses):

1. History 125, Development Problems
2. Economics 242, European Economic History
3. Economics 176, Comparative Economic Systems
4. Geography 227, Geography of the Third World
5. Government 145, America and the Changing World Economy
6. Sociology 257, Cities in Global Perspective

Comparative Diplomacy Cluster (choose three of the following seven courses):

1. History 90, Twentieth-Century Global History
2. Government 179, Comparative Foreign Policy
3. Government 245, U.S. Foreign Policy—Middle East
4. History 253, Twentieth-Century Europe
5. History 255, Twentieth-Century Global Relations
6. Government 280, Soviet Foreign Policy and Its Aftermath
7. Government 237, Arab State System

Self-Designed Area Studies Cluster (three courses):

Students wishing to concentrate on a particular region may select a set of three interrelated courses as their analytic cluster. For example, someone concentrating on modern Asia might choose Economics 177, Chinese and Japanese Economies; History 182, Modern China; and Government 236, Politics of Philippines and Vietnam.

C. Finally, international relations students must take a capstone seminar related to their analytic cluster. Examples of suitable capstone seminars include Government 389 and History 291, Advanced Topics in International Relations; History 288, The Atomic Bomb.

D. International relations students must also fulfill the other existing requirements of their respective majors. International relations students should also note that Economics 10, Issues and Perspectives, is a prerequisite for all 100-level economics courses.

Jewish Studies

■ PROGRAM FACULTY

Everett Fox, Ph.D., program director: Hebrew Bible, Midrash, Jewish ritual and folklore, classical Jewish thought

Shelly Tenenbaum, Ph.D.: sociology of American Jewry, race/ethnicity, Holocaust studies

■ ADJUNCT FACULTY

Paul F. Burke, Jr., Ph.D.: Greek and Latin language and literature, classical mythology, classical art and archaeology, ancient history

George M. Lane, M.A.: U.S. foreign policy, arms control, Middle East politics, U.S.-European relations

Robert J. Vitalis, Ph.D.: international relations, political economy, Middle East politics

■ VISITING FACULTY

Tzilla Barone, B.A.: Hebrew language and literature

■ UNDERGRADUATE PROGRAM

Jewish Studies at Clark are designed to introduce the student to the major historical and religious trends in Jewish civilization since its inception in antiquity. The courses reflect the broad range of developments both encountered and fostered by the Jewish people: their contact with other world civilizations, their classical literature, their social and religious institutions, and their interaction with the modern world. In these courses, Jews and Judaism are studied both in their own internal context and as paradigms for wider trends in history and religion.

■ CONCENTRATION REQUIREMENTS

All students must take JS 174, The Jewish Experience, a survey of Jewish history and thought. In addition to JS 174, students must take six courses of which at least two must be in the Classical area and at least two in the Modern area. One of the six courses must be a capstone project (internship, independent study or advanced seminar with the approval of the program director). Two courses in Hebrew language may also count toward concentration. It should also be noted that courses in other departments cited below are cross-listed.

Classical

JS 117 Introduction to the Hebrew Bible I: Narrative and Law
JS 118 Introduction to the Hebrew Bible II: Prophecy and Poetry
JS 121 Laws and Legends, Maxims and Mystical Tales
JS 122 Workshop in Judaism: Sacred Time and the Life Cycle
JS 123 The Midrashic Tradition
JS 130 Suffering and Evil in Jewish Tradition
JS 262 Jews and Christians in the Ancient World
JS 267 The Religious Experience in the Ancient World

Modern

JS 203 American Jewish Life
JS 204 The Holocaust: A Study of Genocide
JS 210 Arab-Israeli Conflict
JS 245 U.S. Foreign Policy-Middle East
JS 258 Women in Jewish Culture
JS 276 Modern Jewish History and Thought
JS 277 History of Zionism and Israel

■ COURSES

HEBREW LANGUAGE AND LITERATURE COURSES

101-102 ELEMENTARY HEBREW/ LECTURE, DISCUSSION

Refer to course description under Hebrew 101-102. Ms. Barone/Offered every year

103 INTERMEDIATE HEBREW/ LECTURE, DISCUSSION

Refer to course description under Hebrew 103. Ms. Barone/Offered every year

104 INTERMEDIATE/ADVANCE HEBREW/LECTURE, DISCUSSION

Refer to course description under Hebrew 104. Ms. Barone/Offered every year

105 ADVANCED HEBREW/LECTURE, DISCUSSION

Refer to course description under Hebrew 105. Ms. Barone/Offered periodically

299 SEC. 6 SPECIAL TOPICS IN HEBREW

Refer to course description under Hebrew 299.6.

■ JEWISH STUDIES COURSES

117 INTRODUCTION TO THE HEBREW BIBLE I: NARRATIVE AND LAW/LECTURE, DISCUSSION

A close reading (in English) of the first half of the Hebrew Bible, Genesis through Kings II. Issues to be considered include: the rise of Israel against the background of the Ancient Near East, myth and history in the ancient world, biblical storytelling as an artistic and ideological form, and the world view behind biblical laws and rituals. Also discussed is the process by which the Bible took shape, in relation to ancient Israel's self-understanding. The tools of recent research in comparative religion, anthropology, archaeology, and literature are utilized. We also stress the contribution of this literature to Western thought.

118 INTRODUCTION TO THE HEBREW BIBLE II: PROPHECY AND POETRY/LECTURE, DISCUSSION

A close reading (in English) of the poetic portions of the Hebrew Bible, from Isaiah through the Writings. The prophetic revolution in Israel is evaluated: its roots, its impact on its own society as well as on later social and cultural criticism in the West. The artistry of biblical poetry is analyzed, along with the thematics of piety, despair, resignation, and eroticism that are found in such books as the Psalms and the Song of Songs. Finally, books of a more philosophical bent (Ecclesiastes, Job), which question the earlier assumptions of biblical faith, are read. As in Hebrew 117, emphasis is placed in the influence of the Bible on later thinking in the West. Mr. Fox/Offered every year

121 LAWS AND LEGENDS, MAXIMS AND MYSTICAL TALES/LECTURE, DISCUSSION

An introduction in English to major texts of post-Biblical Judaism. Beginning with the Roman period, the texts cover such diverse areas as folklore, ethics, legal rules, and mysticism. The sources involve ancient answers to questions of everyday living, physical and spiritual survival, and celebration; we also trace the reformulation of such questions down to the eve of the modern period. The course stresses how the texts work, centering on the role of commentary as a classic form of Jewish discourse and on an active style of group learning. Mr. Fox/Offered every other year

122 WORKSHOP IN JUDAISM: SACRED TIME AND THE LIFE CYCLE/LECTURE, DISCUSSION

Using the tools of the history of religion and anthropology, this course treats the place of rituals of time in human life and in Judaism in particular. In general, the focus is on issues of myth and ritual, and on the cultural spread of forms. In the case of Judaism, topics include:

early forms and sources, the development of the sacred calendar, the transformation of form and meaning of individual rituals, and parallels throughout the world. Special attention is given to recent Jewish religious expression and to developments in the Jewish women's movement. Mr. Fox/Offered every other year

123 THE MIDRASHIC TRADITION/ LECTURE, DISCUSSION

An English language study of Midrashic literature, the primary Jewish literary expression after the Bible. Written down mainly during the Roman period, the texts comprise independent legends about supernatural beings; writings about biblical characters (filling in gaps in the biblical stories); traditions about the lives of the ancient rabbis; and wide-ranging statements about worldly wisdom, ethical values, and political reality. Sources are ready with an eye toward what they reveal about ancient Jewish society and in the light of recent work in folklore studies. A final unit considers later forms of Midrash, such as Hasidic and contemporary variations. Mr. Fox/Offered every other year

130 SUFFERING AND EVIL IN JEWISH TRADITION/ LECTURE, DISCUSSION

A central problem in Western religious thought is theodicy: how to explain the existence of suffering and evil in a world ruled by a supposedly benevolent God. The course examines a wide variety of Jewish sources on the problem, which propose a wide variety of answers. Central are the biblical book of Job and its interpretations through the centuries; at the other end of history, responses to the Holocaust are considered. Mr. Fox/Offered every other year

174 THE JEWISH EXPERIENCE/ LECTURE, DISCUSSION

A survey of the history of the Jewish community and the development of Judaism from the era of Alexander the Great (c. 325 B.C.E.) to the present. This course examines the major political, religious, social, and economic trends of each period as they affected the evolving Jewish community and the development of Judaism. It emphasizes elements of change and continuity as well as the interaction of the Jewish community with the larger culture/ community. Mr. Fox/Offered every year

203 AMERICAN JEWISH LIFE/VARIABLE FORMAT

Refer to course description under Sociology 203. Ms. Tenenbaum/Offered every other year

204 THE HOLOCAUST: A STUDY OF GENOCIDE/VARIABLE FORMAT

Refer to course description under Sociology 204. Ms. Tenenbaum/Offered every year

210 ARAB-ISRAEL CONFLICT/ LECTURE, DISCUSSION

Refer to course description under Government 210 Mr. Vitalis/Offered every other year

245 U.S. FOREIGN POLICY-MIDDLE EAST/LECTURE, DISCUSSION

Refer to course description under Government 245 Mr. Lane/Offered every year

258 WOMEN IN JEWISH CULTURE/VARIABLE FORMAT

Refer to course description under Sociology 258. Ms. Tenenbaum/Offered every other year

262 JEWS AND CHRISTIANS IN THE ANCIENT WORLD/ LECTURE, DISCUSSION

Refer to course description under Classics 262. Mr. Burke/Offered every other year

267 THE RELIGIOUS EXPERIENCE IN THE ANCIENT WORLD/ LECTURE, DISCUSSION

Refer to course description under Classics 267. Mr. Burke/Offered every other year

276 MODERN JEWISH HISTORY AND THOUGHT/ LECTURE, DISCUSSION

Refer to course description under History 276. Staff/Offered every other year

277 HISTORY OF ZIONISM AND ISRAEL/SEMINAR

The first part of the course examines the rise and development of the Zionist idea, Zionist parties, politics and diplomacy in relation to Jewish history and international affairs from 1880 until 1948. The second part of the course analyzes Israel's domestic and foreign policies from 1948 to the present. Special attention is given to social and political trends in Israeli society. Staff/Offered periodically

Peace Studies

■ PROGRAM FACULTY

Joseph H. deRivera, Ph.D., program director: emotions, social psychology and the prevention of war

Patrick G. Derr, Ph.D.: ethics, philosophy of science, hazards management

Cynthia Enloe, Ph.D.: women and politics, militarization, comparative politics

Robert C, Hsu, Ph.D.: economic development, comparative economic systems, international economics.

George Lane, M.A.: U.S. foreign policy, arms control, Middle East history and politics

Douglas J. Little, Ph.D.: U.S. diplomatic history, America since 1900, modern Latin America, Middle East

Robert J. Ross, Ph.D.: urban political economy, political sociology, social movements

Ann Seidman, Ph.D.: international division of labor, South Africa

Shelly Tenenbaum, Ph.D.: race and ethnicity, Holocaust studies, social stratification

Barbara P. Thomas-Slayter, Ph.D.: rural organization, women and public policy, peasant behavior

Robert Vitalis, Ph.D.: international relations, political economy, Middle East politics

Theodore H. Von Laue, Ph.D. (emeritus): global perspectives in history

Walter E. Wright, Ph.D.: ethics, philosophy of religion

■ PROGRAM AND CONCENTRATION

The Peace Studies Program is concerned with analyzing and transforming individual behavior, national policy, and human institutions in order to promote peace and justice in the world. The program promotes discussion and study on issues of conflict and its management, citizen responsibility, cross-cultural understanding, environmental protection, human rights, international security, social justice, and the building of community. In addition, the program sponsors research, public service, and forums on peace and international issues.

Undergraduates may concentrate in peace studies to complement any major. "Peace Studies Concentration" will appear on the student's final transcript. Interested students may also design a major in peace studies via the University's self-designed major. The concentration draws together the knowledge of several disciplines in the context of the search for peace, while enhancing students' critical thinking skills and awareness of the connections between local and global issues. Departments and programs represented in peace studies include government, history, international development, philosophy, psychology, and sociology.

Course work, research, and internships enable students to apply their theoretical understanding of the issues of peace to practical situations. Students with a concentration in peace studies are prepared to enter careers and graduate study in such fields as public policy, international development, labor relations, environment and ecology, and international relations. They join the "critical mass" of informed citizens who are prepared to take an active role in shaping constructive policies in the public sector and civil society.

The Peace Studies Office provides information on internships, jobs and careers; a library; and PeaceNet, a computer link to international conferences and bulletin boards.

■ REQUIREMENTS

Students who wish to concentrate in peace studies take 170 Introduction to Peace Studies and at least one course from each of three arenas of peace making: The personal, the societal and the global. In addition, students must take either an internship or a directed reading, research or capstone course (bringing the minimum number of courses required for the concentration to six).

■ COURSES

The following is a partial list of Clark's peace studies course offerings. Students may petition the Peace Studies Committee to receive concentration credit for courses other than those listed below. More information can be obtained from participating faculty or from the Peace Studies Office, Jonas Clark Hall, Room 319, (508) 793-7663.

170 AN INTRODUCTION TO PEACE STUDIES

An examination of love, fear, conflict, and other basic processes involved in group dynamics, interpersonal relations, community psychology, intergroup relations, organizational behavior, and the interface between human nature and culture. The basic processes are related to the choices that govern the attempt to achieve a world of peace and justice. Students are asked to apply their knowledge of basic processes by undertaking two moral actions. The first of these is on a direct personal level and deals with the ability to assert oneself, to accept others, and to take risks. The second involves field experience in dealing with the problems posed by our memberships in a world community: the reduction of hunger, poverty, and prejudice; environmental degradation; nuclear and conventional arms proliferation; and the securing of human rights. Mr. deRivera/Offered every year

■ PERSONAL COURSES

050 LOCAL ACTION, GLOBAL CHANGE

Refer to course description under International Development 050. Mr. Ford and Ms. Thomas-Slayter/Offered every year

246 PSYCHOLOGY OF PEACEMAKING

Refer to course description under Psychology 246. Mr. deRivera/Offered every year

273 AIDS: ETHICS AND PUBLIC POLICY

Refer to course description under Philosophy 273 Mr. Derr/offered every year

■ SOCIETAL COURSES

130 ADVANCED ISSUE IN MEDICAL ETHICS

Refer to course description under Philosophy 130 Mr. Derr/Offered every semester

176 COMPARATIVE ECONOMIC SYSTEMS

Refer to course description under Economics 176 Mr. Hsu/Offered every year

204 THE HOLOCAUST: A STUDY OF GENOCIDE

Refer to course description under Sociology 204 Ms. Tenenbaum/Offered every year

223 THE CIVIL RIGHTS MOVEMENT

Refer to course description under History 223 Ms. Greenwood/Offered every other year

243 POLITICAL SOCIOLOGY

Refer to course description under Sociology 243 Mr. Ross, staff/Offered every year

252 RACE AND AMERICAN SOCIETY

Refer to course description under Sociology 252 Ms. Tenenbaum/Offered every year

265 SOCIAL MOVEMENTS

Refer to course description under Sociology 265 Staff/Offered every year.

■ GLOBAL COURSES

125 DEVELOPMENT PROBLEMS

Refer to course description under International Development 125 Ms. Thomas-Slayter/ Offered every year

173 POLITICS OF WAR AND PEACE

Refer to course description under Government 173. Staff/Offered periodically Mr. Vitalis/Offered every year

■ GLOBAL COURSES

211 THE UNITED NATIONS

Refer to course description under Government 211 Mr. Vitalis/Offered every year

228 COMPARATIVE POLITICS OF RACE, ETHNICITY, AND GENDER

Refer to course description under Government 228. Ms. Enloe/Offered every other year

248 SEMINAR IN GLOBAL CAPITALISM

Refer to course description under Sociology 248 Mr. Ross/Offered every year

287 THE UNITED STATES AND THE NEW EUROPE

Refer to course description under Government 287. Mr. Lane/Offered every year

289 ADVANCED STUDIES IN INTERNATIONAL RELATIONS: U.S. AND THIRD WORLD RELATIONS

Refer to course description under Government 289 Mr. Vitalis/Offered every year

INTERNSHIPS, DIRECTED READINGS, RESEARCH AND CAPSTONE COURSES

285 CAPSTONE: SPECIAL TOPICS IN PEACE STUDIES

The content of this course varies. It may be taught in conjunction with a directed reading or with other peace studies courses. Topics include theories and techniques of conflict resolution; strategies and effectiveness of various interest groups working for peace; nonviolent resistance and other approaches to peacemaking; and the connection between interpersonal, intergroup, cultural, and international dimensions of conflict and peacemaking. Staff/Offered periodically

299 SEC. 9 PEACE STUDIES INTERNSHIP

Students concentrating in peace studies are encouraged to consider an internship for their sixth concentration requirement. Peace studies offers internships periodically in peer mediation, conflict resolution training, and other skills. The Peace Studies Office has information about internship opportunities with peace and justice organizations in Worcester, Boston, New York, Washington, D.C., and elsewhere.

Race and Ethnic Relations

PRINCIPAL ADVISORS

Beverly Grier, Ph.D., coordinator: African politics, African American politics, women's studies, international development

Janette Greenwood, Ph.D., American social and African American history, history of the South

Shelly Tenenbaum, Ph.D., Jewish studies, race/ethnicity, social stratification

Race and Ethnic Relations is an interdisciplinary concentration that enables students to study relations between races and ethnic groups. The concentration brings together a broad range of courses in the humanities and social sciences from which students can choose in order to focus their reading and research. With courses on the Caribbean, Europe, the Middle East, Africa, and Asia as well as the United States, the concentration also provides students with opportunities to explore race and ethnic relations from a comparative perspective.

Requirements

Students fulfilling the race and ethnic relations concentration are required to take a minimum of six courses. At least one course must focus on a country other than the United States. A minimum of three courses must be at the 200-level, and one of those must be an advanced seminar approved by the student's advisor. The advanced seminar will serve as the capstone experience. The six courses must be distributed as follows:

1. Three courses in the humanities (classics, English, foreign languages and literature, and history). At least one must be a course in literature.

2. Three courses in the social sciences (cultural and global processes, geography, government, international development, psychology, and sociology).

COURSES

HIST 016 RACE AND ETHNICITY IN AMERICAN HISTORY

Ms. Greenwood/Offered every year

ID 050 LOCAL ACTION GLOBAL CHANGE
Mr. Ford and Ms. Thomas-Slayter/
Offered every year

HIST 074 THE WORLD AND THE WEST
Mr. Richardson/Offered periodically

HIST 080 INTRODUCTION TO MODERN ASIA
Mr. Ropp/Offered every other year

HIST 103 AFRICA AND THE WORLD
Ms. Grier/Offered every year

HIST 124 ETHNICITY AND NATIONALISM IN MODERN EUROPE: A COMPARATIVE PERSPECTIVE
Mr. Borg/Offered every year

ID 125 DEVELOPMENT PROBLEMS
Ms. Thomas-Slayter/Offered every year

SPAN 139 HISPANIC CARIBBEAN FICTION
Ms. Acosta-Cruz/Offered every other year

GEOG 142 CITIES AND CULTURE: THE AMERICAN CITY
Mr. Bowden/Offered every year

SPAN 145 HISPANIC AMERICAN SHORT STORY
Mr. Ferguson, Ms. D'Lugo, Ms.
O'Connell/Offered every year

FRENCH 158 THE FRENCH-SPEAKING WORLD
Ms. Kaufmann/Offered every other year

HIST 161 BRITISH INDIA
Mr. Richardson/Offered periodically

GEOG 170 DIVIDED CITIES, CONNECTED LIVES
Ms. Hanson/Offered every year

HIST 174 THE JEWISH EXPERIENCE
Mr. Fox/Offered every year

GOVT 178 SOUTH AFRICA: HISTORY AND CONTEMPORARY POLITICS
Ms. Grier/Offered every other year.

ENGL 182 AFRICAN-AMERICAN LITERATURE I
Staff/Offered every other year

ENGL 191 LANGUAGE DIVERSITY IN THE UNITED STATES
Ms. Johnson/Offered every year

SOC 203 AMERICAN JEWISH LIFE
Ms. Tenenbaum/Offered every year

SOC 204 HOLOCAUST: A STUDY IN GENOCIDE
Ms. Tenenbaum/Offered every year.

HIST 205 HISTORY OF THE AMERICAN WEST
Ms. Deutsch/Offered every other year

HIST 206 SEMINAR IN THE UNITED STATES URBAN HISTORY
Ms. Deutsch/Offered periodically

SPAN 207 FIELDWORK IN THE HISPANIC COMMUNITY
Ms. Acosta-Cruz/Offered every year

GOVT 210 ISRAELI-ARAB CONFLICT
Mr. Vitalis/Offered every other year

HIST 211 NATIVE AMERICAN HISTORY THROUGH AUTOBIOGRAPHY
Ms. Deutsch/Offered every other year

HIST 219 HISTORY OF AMERICAN WOMEN
Ms. Deutsch/Offered every year

HIST 220 WORCESTER HISTORICAL MUSEUM/PUBLIC HISTORY
Ms. Greenwood/Offered every year

HIST 221 AFRICAN-AMERICAN HISTORY
Ms. Greenwood/Offered every other year

HIST 222 HISTORY OF THE SOUTH
Ms. Greenwood/Offered every other year

HIST 223 THE CIVIL RIGHTS MOVEMENT
Ms. Greenwood/Offered every other year

HIST 224 SEMINAR IN THE HISTORY OF AFRICAN-AMERICAN WOMEN
Ms. Grier/Offered every year

GOVT 225 AFRICAN AMERICAN POLITICS
Ms. Grier/Offered every year

PSYC 227 RESEARCH IN SOCIOCULTURAL APPROACH TO MIND
Mr. Wertsch/Offered periodically

GOVT 228 COMPARATIVE POLITICS OF RACE, ETHNICITY, AND GENDER
Ms. Enloe/Offered every other year

SOC 246 SOCIAL PLANNING AND SOCIAL POLICY
Mr. Ross/Offered every year

SOC 247 CITIES AND SUBURBS
Mr. Ross/Offered every year

SOC 252 RACE AND AMERICAN SOCIETY
Ms. Tenenbaum/Offered every year

HIST 254 EMPIRE AND RACE IN BRITISH HISTORY
Mr. Richardson/Offered periodically

■ CLASSICS

262 JEWS AND CHRISTIANS IN THE ANCIENT WORLD
Mr. Burke/Offered every other year

HIST 263 AFRICANS AND ASIANS IN EUROPEAN HISTORY
Mr. Richardson/Offered periodically

PSYC 265 CULTURAL IDENTITY AND NATION-STATE
Mr. Wertsch/Offered periodically

HIST 268 FOREIGNERS PERCEIVED: INTERCULTURAL RELATIONS THROUGH TRAVEL WRITINGS
Staff/Offered periodically

ID 270 ETHNIC AND SOCIAL DIFFERENTIATION
Staff/Offered every year

CIGP 271 RACE, MIGRATION, GENDER, AND ETHNICITY
Ms. Bhachu/Offered every other year

HIST 276 MODERN JEWISH HISTORY AND THOUGHT
Staff/Offered every other year

GOVT 286 ADVANCED TOPICS: USSR AND ITS SUCCESSOR STATES
Ms. Sochor/Offered every year

ENGL 289 AFRICAN-AMERICAN LITERATURE II
Staff/Offered every other year

299 SEC. 1 DIRECTED READINGS
Staff/Offered every year

299 SEC. 5 SPECIAL PROJECTS
Staff/Offered every year

299 SEC. 9 INTERNSHIP
Staff/Offered every year

Women's Studies

■ PROGRAM FACULTY

Margarete Arndt, D.B.A., Graduate School of Management: management of health care organizations, practice patterns, women in the health care system

Diane Bell, Ph.D., Anthropology, Henry R. Luce Professor of Religion, Economic Development and Social Justice, College of the Holy Cross

Parminder Bhachu, Ph.D., Anthropology, Henry R. Luce Professor of Cultural Identities and Global Processes: urban anthropology, international migration and immigration, race, ethnicity, gender, culture, class and consumption, multiculturalism

Marcia Butzel, Ph.D., Foreign Languages and Literatures: film and cultural studies

Maria Acosta Cruz, Ph.D., Foreign Languages and Literatures: Latin American literature and comparative literature

Judith Wagner DeCew, Ph.D., Philosophy: ethics, philosophy of law, social and political theory

Carol D'Lugo, Ph.D., Foreign Languages: Latin American literature, Spanish culture, Mexican women writers

Sarah Deutsch, Ph.D., History: U.S. social history and U.S. women

Linda Dusman, D.M.A., Visual and Performing Arts: composer, theories of performance and music reception

Cynthia H. Enloe, Ph.D., Government and International Relations: women and politics, militarization, Asian and British politics, ethnic and racial politics

Patricia M. Ewick, Ph.D., Sociology: research methods; gender, law, criminology

Rachel Joffe Falmagne, Ph.D., Psychology: women, psychology and society, language and thought, semantic development, reasoning

SunHee Kim Gertz, Ph.D., English: Western European medieval literature, theory, and characterization of women

Bonnie Grad, Ph.D., Visual and Performing Arts: nineteenth and twentieth century U.S. American and Western European painting, history of landscape art, women artists

Janette Greenwood, Ph.D., History: African-American history; southern history

Beverly Grier, Ph.D., Government and International Relations: comparative politics, African politics, politics of land, and women's and children's labor

Melissa Haussman, M.A., Government: women and politics, women and law, women and the constitution in the U.S. and Canada

Susan E. Hanson, Ph.D., Geography: urban-social geography, transportation, local labor markets

Serena S. Hilsinger, Ph.D., English: modernist literature, women writers

Fern Johnson, Ph.D., English: language, communication, and culture, with special emphasis on gender and race, feminist linguistics

Dorothy Kaufmann, Ph.D., Foreign Languages and Literatures: contemporary French feminism, women writers, comparative cultural studies

Sharon Perlman Krefetz, Ph.D., Government and International Relations: urban politics, suburban politics, women and politics

Deborah Merrill, Ph.D., Sociology: aging, family, medicine, and demography

Mary Brown Parlee, Ph.D., Psychology: Visiting Research Professor: feminist psychologist, women's health issues, psychology of menstruation and menopause, feminist analyses of science

Dianne Rocheleau, Ph.D., Geography: cultural/political/systems ecology, gender, forestry and agriculture, environment/development

Paul S. Ropp, Ph.D., History: Chinese social and intellectual history, women in China

Christina Sommers, Ph.D., Philosophy: history of ethics, contemporary moral theory

Shelly Tenenbaum, Ph.D., Sociology: Judaic studies, race/ethnicity, social stratification, Jewish women in the U.S. and Europe

Barbara Thomas-Slayter, Ph.D., Program of International Development: community organization, Third-World women and public policy, rural development, gender and environment

Virginia Mason Vaughan, Ph.D., English: Shakespeare, Renaissance drama, non-dramatic Renaissance literature

NOTE: In addition to the above faculty, who teach regularly in the program, other members of the faculty from a number of departments are active participants in the Women's Studies Program, have research interests in this area, and offer courses that include a significant women's studies component.

■ UNDERGRADUATE PROGRAM

Currently, eleven departments offer undergraduate courses that are cross-listed as women's studies. Women's Studies is an interdisciplinary field of study that stresses the interconnectedness of phenomena. The characterization of women in literature and art, cultural images of women, the societal structures within which we function, and the nature of individual women's experiences form an interrelated cluster of phenomena for study. Women's Studies stresses the diversity of women's experiences and the importance of societal constructs and contexts—such as gender, ethnicity, race, and class—to the understanding of individual and collective experience, past and present.

Concentration

The program offers a concentration in women's studies, which may be taken along with any departmental major. "Women's Studies Concentration" will appear on the student's graduating transcript along with her/his major. Interested students may also design a women's studies major, in consultation with the Dean of the College, the director of women's studies, and women's studies faculty members.

Requirements

A. Major in an established department or a self-designed major.

B. SOC/WS 110: Introduction to Women's Studies/Sociology of Gender

C. Four additional courses listed as part of the Women's Studies Program (It is strongly recommended that these include a variety of disciplinary approaches. Two of these courses should be at the 200 level.)

D. An internship, special project, or advanced research seminar in women's studies.

The program encourages extensive and intensive consultation between concentrators, the director, and other members of the women's studies faculty.

■ DOCTORAL PROGRAM

Program Goals and Emphasis

The Ph.D. in Women's Studies is designed for future academics as well as for professionals in public policy, government, and the private sector. Those with degrees in traditional disciplines who wish to broaden their approach along feminist lines are encouraged to apply, as well as those already holding B.A. or M.A. degrees in Women's Studies.

The goals of the Ph.D. program are to provide a foundation in Women's Studies as an integrated, cohesive discipline and, at the same time, to enable students to gain competence in focused segments of that discipline. To that effect, the core of the program includes a team-taught, cross-disciplinary course in the foundations of feminist inquiry and methodology, as well as a proseminar and a research colloquium. In addition to these four core courses, students take seminars and courses to acquire in-depth proficiency in one of three interdisciplinary areas, flexibly defined as:

Geography, Environment, and Development Language, Literature, and the Arts History, Psychology, and Society

Students with different interests may formulate a program of studies consonant with their goals in consultation with an advisory committee. Overall coursework must ensure breadth of interdisciplinary knowledge, as well as depth of understanding in the area of chosen expertise.

The Women's Studies Ph.D. program is designed primarily for full-time students. However, we are fully aware that some students' responsibilities will require that they carry on their doctoral work on a less-than-full-time basis, and some part-time students will be accepted selectively. The student's advisory committee will work with the student to ensure coherence, completion, and a sense of community. Students who want to consider a part-time schedule should let the program director know as soon as possible.

The Advisory Committee

For each entering student, the Ph.D. Curriculum Committee will assign an advisory committee composed of two Women's Studies faculty from different departments. A student in the program may change advisors at any time with the agreement of the proposed new advisor, the former advisor, and the program director.

One function of the advisory committee is to guide students in the formulation of their scholarly interests and to develop a program of studies appropriate to those interests, ensuring that the student will achieve interdisciplinary breadth as well as depth in an area of expertise.

In addition, the committee will provide clearance on particular courses or arrangements, as when a student enrolls in a 200-level undergraduate course and needs to determine what additional work is to be achieved.

By the end of the second year of study, each student will select an orals committee of at least three faculty representative of the chosen areas of study. Together, they will develop a reading list for the oral exam and plan any course work leading to the oral exam. This committee will then serve as the orals examining committee.

At the point of the Ph.D. dissertation proposal, the student's Ph.D dissertation committee will serve as the student's primary advisory group.

General requirements of the graduate program (Total: 16 credits)

The core:

(a) Graduate Proseminar in Women's Studies (WS 300) (two credits)

(b) Foundations of Feminist Inquiry (WS 301) (two credits)

(c) Graduate Research Colloquium in Women's Studies (WS 302) (one credit)

Graduate students will be expected to participate in an ongoing research colloquium during the entire period of their course of study. The research colloquium will meet approximately every two weeks during both the fall and spring semesters. Each student will be expected to present material regarding her research-in-progress at least twice. The second (or final) presentation should be on the dissertation open to the public; after this presentation is successfully completed, the student will be awarded one course credit for participation in the colloquium. Students should register for the colloquium as a course during the semester they expect to get credit for it. If they do not present during that semester, they will be awarded an "IP" grade until they do. The preliminary presentation can be on a seminar paper or other work in progress. Normally, a fellow student will be appointed to serve as respondent to each paper presented. Outside scholars and faculty members may also be invited to present material in the colloquium, but the primary focus will be on graduate student research. All students are required to take this course.

Other Requirements

(d) Residency requirement
We require a minimum of three years residency.

(e) Language requirement
Although we have no across-the-board language requirement, a working proficiency in one or more languages relevant to the student's areas of scholarship may be required, based upon the recommendation of the student's advisory committee.

(f) A minimum of 11 credits in addition to the five core credits described above.
A full-time Ph.D. student normally takes three or four credits of courses per semester. Some of these will be in the form of directed readings or independent research courses.

The student's concentration will govern the particular sequence of courses taken. Overall course work must ensure breadth of interdisciplinary knowledge as well as depth of understanding in the area of chosen expertise. A minimum of eight courses must be taken in Women's Studies. For courses outside of Women's Studies, approval must be obtained from the Women's Studies Ph.D. Committee. Normally, no more than five courses may be taken at the 200 level—i.e., mixed upper level undergraduate/graduate; for these, additional work must be completed, as determined by the instructor and approved by the student's advisory committee.

(g) Teaching experience
Although we will not require it, we will strongly encourage students to gain teaching experience during their doctoral studies.

(h) M.A. qualifying paper.

At the end of the second year of full-time residency (or its equivalent for part-time students), a student must produce a Master's qualifying paper. If the student opts for research work, the qualifying paper is expected to have the same scope as a publishable journal article. To serve as an M.A. qualifying paper, a creative project will be expected to make a roughly equivalent contribution. Writing this research paper will occur as part of a course or a directed research carrying two of the twelve credits listed above under (f).

If a student enters with a Master's degree, the M.A. thesis requirement may be waived. The student must petition the Ph.D. committee to that effect.

Note: Admission to the program is for the Ph.D., and normally all students will continue through to a Ph.D. There is no separate Women's Studies M.A. program. However, if a student wishes to receive the degree and has completed the requirements, a M.A. will be awarded.

(i) Oral comprehensive examination
In the first semester of the third year, the student will take the oral comprehensive exam, the successful completion of which is required for Ph.D. candidacy. If the student does not pass the oral comprehensive examination, he/she will be allowed to take it a second time.

(j) Ph.D. proposal
A Ph.D. proposal will be written in conjunction with the student's Ph.D. committee (three members, at least two of whom should be from the Women's Studies faculty) and approved by the Women's Studies Ph.D. Committee. No longer than fifteen double-spaced pages, it should: explain the student's working hypothesis, summarize relevant critical literature and evidence to be used, describe and justify the research methodology, while also providing examples, bibliography, projected chapter divisions (or other form of the plan) and time schedule.

(k) Ph.D. dissertation
The Ph.D. dissertation is a substantial, independently conducted and intensively researched work of scholarship.

(l) Ph.D. presentation
Upon approval of the Ph.D. dissertation by the student's committee, the student will present findings to members of her/his dissertation committee; this presentation will be open to the Clark community and guests. The committee, along with other Women's Studies faculty members present,

will evaluate the student's performance. The primary reader will combine this evaluation with the thesis committee's evaluation of the dissertation and send the final recommendation for the Ph.D. degree to the Dean of Graduate Studies and Research.

Where it seems appropriate, a student may construct a program and dissertation topic drawing on a specific traditional discipline, but it must be in a clearly interdisciplinary Women's Studies spirit.

Leaves of Absence

At the request of the student, a leave of absence may be granted from the graduate program for personal reasons or in order to pursue scholarly activity or training at another institution. A leave normally will be given for no more than one year. Only under unusual circumstances will a leave be extended. Moreover, a leave will push back the student's existing schedule for the completion of program requirements by the duration of the leave. (For example, a student taking a year's leave for personal reasons from the second year of graduate study will be expected to meet the program requirements for the second year graduate students at the end of the next academic year following return to the program). Students who are not behind in program requirements and who wish to be considered for financial assistance upon return from a leave will have to notify the program in writing of the expected return by January 15.

Grading

Anything lower than a "B-" is not acceptable and means that the course must be repeated. To remain in good standing, the student must maintain a "B" average. A final grade of "F" constitutes grounds for withdrawal from the program.

A Pass ("P)/No-Record (NR) grading option may be elected, whereby "P" signifies that the student has performed at a "B-" or above level, as determined by the letter grade handed in by the faculty member. Students may take a maximum of three courses on a P/NR basis, one of these being the research colloquium.

Incompleted courses in the spring of any given year must be completed by December 1 of the same year. Incompletes given in the fall semester must be completed by September 1 of the following year.

■ COURSES

The following is a list of Clark's women's studies course offerings; more information can be obtained from participating faculty or from the Women's Studies Office, Carriage House, first floor, 125 Woodland Street, (508) 793-7358.

In addition to courses offered by the undergraduate college and listed below, women's studies concentrators also have the opportunity to enroll in selected courses offered by the College of Professional and Continuing Education (COPACE). COPACE provides a diverse list of courses that is revised each year and is enriched by collaboratives with various cultural institutions in Worcester. Contact the registrar in COPACE directly (508-793-7217) for current academic year and summer offerings.

110 INTRODUCTION TO WOMEN'S STUDIES:SOCIOLOGY OF GENDER

Refer to course description under Sociology 110. Ms. Ewick/Staff Offered every year

128 FAMILY AND SEX ROLES IN CROSS-CULTURAL PERSPECTIVE: AN ANTHROPOLOGICAL APPROACH

Refer to course description under International Development 128 Mr. Nixon/Offered every other year

133 FICTION BY WOMEN WRITERS, 1688-1899

Refer to course description under English 133. Ms. Hilsinger/Offered every other year

134 MODERN FICTION BY WOMEN WRITERS

Refer to course description under English 134. Ms. Hilsinger/Offered every other year

136 WOMEN IN HISPANIC LITERATURE

Refer to course description under Spanish 136. Ms. O'Connell, Staff/Offered every other year

137 GENDER, SPACE, ENVIRONMENT

Refer to course description under Geography 136 Ms. Rocheleau/Offered every year

150 MEDIEVAL LITERATURE

Refer to course description under English 150 Ms. Gertz/Offered every year

175 WOMEN AND POLITICS

Refer to course description under Government 175 Staff/Offered every year

184 ART IN CULTURE: THE PAINTINGS OF GEORGIA O'KEEFFE

Refer to course description under Art History 184 Ms. Grad/Offered every year

185 WOMEN'S WRITING IN TWENTIETH-CENTURY FRANCE

Refer to course description under French 185. Ms. Kaufmann/Offered every other year

203 AMERICAN JEWISH LIFE

Refer to course description under Sociology 203. Ms. Tenenbaum/Offered every year

208 COMPARATIVE POLITICS OF WOMEN

Refer to course description under Government 208. Ms. Enloe/Offered every other year

212 WOMEN AND SOCIAL CHANGE

Refer to course description under International Development 212 Ms. Thomas-Slayter/ Offered every year

213 GENDER AND THE CITY IN THE U.S.

Refer to course description under History 213/313. Ms. Deutsch/Offered periodically

219 HISTORY OF AMERICAN WOMEN

Refer to course description under History 219. Ms. Deutsch/Offered every year

221 FEMINIST THEORY

Refer to course description under Philosophy 219 Ms. Sommers/Offered every other year

224 HISTORY OF AFRO-AMERICAN WOMEN/SEMINAR

Refer to course description under History 224 Ms. Grier/Offered every other year

228 COMPARATIVE POLITICS OF RACE, ETHNICITY AND GENDER

Refer to course description under Government 228. Ms. Enloe/Offered every other year

237 FEMINISM, NATURE, AND CULTURE

Ms. Emel/Offered every other year

244 GENDER, WORK, AND SPACE

Refer to course description under Geography 244. Ms. Hanson/Offered every other year

247 WOMEN IN SOCIETY/SEMINAR

Refer to course description under Psychology 249 Ms. Joffe Falmagne/Offered every year

248 WOMEN AND ART/SEMINAR

Refer to course description under Art History 248 Ms. Grad/Offered every other year

249 SIGNS AND CROSSROADS: SEMIOTIC THEORY AND PRACTICE

Refer to course description under English 249. Ms. Gertz/Offered periodically

250 MEDIEVAL LITERATURE

Refer to course description under English 250. Ms. Gertz/Offered every other year

251 MIGRATION, GENDER AND ETHNICITY

Refer to course description under Cultural Identities and Global Processes (CIGP 271) Ms. Bhachu/Offered every year

252 THE JONAS AND SUSAN CLARK COLLECTION/SEMINAR

Refer to course description under Art History 250 Ms. Grad/Offered every other year

253 CULTURE AND CONSUMPTION IN LOCAL AND GLOBAL CONTEXTS

Refer to course description under Cultural Identities and Global Processes (CIGP) 275 Ms. Bhachu/Offered every year

255 THE FAMILY

Refer to course description under Sociology 255 Ms. Merrill/Offered every year

256 STUDIES IN THE RENAISSANCE

Refer to course description under English 255. Ms. Vaughan/Offered every other year

258 WOMEN IN JEWISH CULTURE

Refer to course description under Sociology 258 Ms. Tenenbaum/Offered every other year

261 WOMEN AND MILITARIZATION IN A COMPARATIVE POLITICS PERSPECTIVE

Refer to course description under Government 261. Ms. Enloe/Offered every other year

275 WORKS OF VIRGINIA WOOLF

Refer to course description under English 275. Ms. Hilsinger/Offered every other year

276 POLICIES, PROJECTS, AND STRATEGIES FOR CHANGE: A FOCUS ON GENDER

Refer to course description under International Development 275. Ms. Thomas-Slayter/Offered every year

277 GENDER, RESOURCES, AND DEVELOPMENT/SEMINAR

Refer to course description under Geography 277 Ms. Rocheleau/Offered every other year

282 CHINESE WOMEN IN LITERATURE AND SOCIETY

Refer to course listing under History 282 Mr. Ropp/Offered every other year

288 GENDER AND FILM

Refer to course description under Screen Studies 288. Ms. Butzel/Offered every other year

295 GENDER IN LANGUAGE USE/SEMINAR

Refer to course description under English 295 Ms. Johnson/Offered every other year

296 WOMEN MIRRORED IN EAST AND WEST

Refer to course description under English 296 or History 296. Ms. Gertz and Mr. Ropp/ Offered periodically

299 SEC. 1 UNDERGRADUATE DIRECTED READINGS IN WOMEN'S STUDIES (TUTORIAL)

299 SEC. 2 UNDERGRADUATE DIRECTED RESEARCH IN WOMEN'S STUDIES (TUTORIAL)

299 SEC. 5 UNDERGRADUATE SPECIAL PROJECT IN WOMEN'S STUDIES (TUTORIAL)

299 SEC. 9 UNDERGRADUATE INTERNSHIP IN WOMEN'S STUDIES (TUTORIAL)

300 GRADUATE PROSEMINAR IN WOMEN'S STUDIES

This seminar surveys theoretical analyses and empirical research pertaining to the roles of women in societies and cultures, to cultural representations of women, and to women's individual functioning and development in context. The course draws on the expertise of faculty associated with the women's studies program and is an introduction to all three areas of concentration within the program. It is designed to reflect the practice of interdisciplinary linking and to foster integration between theoretical perspectives and between levels of analysis.

The topics will include women and economic development; women, societies, and the political process; women's history and diversity; the gendering of social institutions and of labor practices; sociolinguistic, semiotic and cognitive analyses of language, gender and power; the social construction of gender, self and identity; feminist perspectives on diversity and difference; representation of women in literature and in art; and women writers, artists and composers. Specific topics will vary from year to year. Staff/Offered every other year—Ms. Brown Parlee (1994-95)

301 FOUNDATIONS OF FEMINIST INQUIRY IN SOCIAL SCIENCES

302 FOUNDATIONS OF FEMINIST INQUIRY IN HUMANITIES

This seminar provides an overview of recent theoretical analyses and of methodological issues pertaining to the conduct of feminist inquiry in the humanities and social sciences. The course offers an interdisciplinary analysis of theories of gender and of the relations between gender and power. The approaches surveyed will reflect alternative theoretical perspectives and will span literary and cultural theory, social and political theory, feminist epistemology, theories of differences, and theories of individual development. Staff/Offered every other year

390 GRADUATE RESEARCH COLLOQUIUM IN WOMEN'S STUDIES

Staff/Offered every year

305 FEMINIST FILM THEORY AND CRITICISM/SEMINAR

This seminar explores the emergence of feminist film criticism from the women's movement of the 1970s and its subsequent elaboration via such theoretical frameworks as semiotics, psychoanalysis, Marxism, and poststructural approaches to culture. Emphasis is placed on understanding the role of critical theory in feminist analysis of contemporary culture, particularly film and television texts. Reading includes work by Freud, Foucault, Lacan, Metz, Mulvey, de Lauretis, and Doane. Seminar participants will analyze a range of film, video, and television texts in weekly screenings and discussions. This seminar is open to graduate students and advanced undergraduates with permission. Cross-listed with Screen Studies 305 Ms. Butzel/Offered every year

306 GENDER AND FIELDWORK

Women anthropologists have always been clear about the gendered nature of their practice: feminist scholars have given us the analytical tools to explore the epistemological and ethical ramifications of such work. The issues raised in this extensive body of literature are central to the postmodern critiques of the concept of culture, yet they are frequently dismissed as of concern to women only. In this course we explore the shifting meanings attached to gender in the doing of fieldwork, the writing of ethnography, and the generation of understandings of other cultures. Ms. Bell/Offered periodically

333 ADVANCED TOPICS IN WOMEN'S HISTORY

Refer to course description under History 333 Ms. Deutsch/Offered periodically

334 ADVANCED RESEARCH SEMINAR

Refer to course description under History 334 Ms. Deutsch/Offered periodically

386 GRADUATE SEMINAR IN COMPARATIVE POLITICS

Refer to course description under Government 286 Ms. Enloe/Offered every other year

389 WOMEN IN THE HEALTH CARE SYSTEM

Refer to course description under MHA 289 Ms. Arndt/Offered Every Other Year

399 SEC. 1 GRADUATE DIRECTED READINGS IN WOMEN'S STUDIES (TUTORIAL)

Staff/Offered every semester

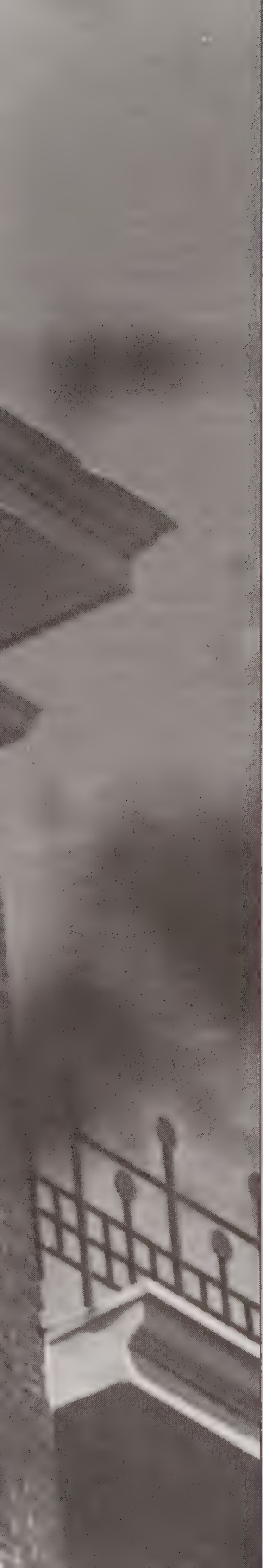
399 SEC. 2 GRADUATE DIRECTED RESEARCH IN WOMEN'S STUDIES (TUTORIAL)

Staff/Offered every semester

399 SEC. 3 GRADUATE DIRECTED WRITINGS IN WOMEN'S STUDIES (TUTORIAL)

Staff/Offered every semester

399 SEC. 5 GRADUATE SPECIAL PROJECT IN WOMEN'S STUDIES (TUTORIAL) STAFF/OFFERED EVERY SEMESTER



DIRECTORY

Faculty

Members of the faculty and officers are listed alphabetically with their titles, degrees, and years at Clark.

■ PRESIDENT

RICHARD P. TRAINA, Ph.D., President of the University. B.S., University of Santa Clara, 1958; M.A., University of California, Berkeley, 1960; Ph.D., 1964. (1984-)

■ EMERITI

HARRY C. ALLEN JR., Ph.D., Professor of Chemistry, Emeritus. B.S., Northern University, 1948; Sc.M., Brown University, 1949; Ph.D., University of Washington, 1951. (1969-86)

ROY S. ANDERSEN, Ph.D., Professor of Physics, Emeritus. A.B., Clark University, 1943; A.M., Dartmouth College, 1948; Ph.D., Duke University, 1951. (1960-1992)

MORTIMER H. APPLEY, Ph.D., President, Emeritus; Professor of Psychology. B.S., The City College, New York, 1942; M.A., University of Denver, 1946; Ph.D., University of Michigan, 1950; D.Sc., York University, 1975; L.H.D., Northeastern University, 1983; Litt. D., American International College, 1984; LL.D., Clark University, 1984. (1974-1983)

ROBERT W. BAKER, Ph.D., Professor of Psychology. A.B., Hobart College, 1947; Ph.D., Clark University, 1953. (1954-1994)

RAYMOND E. BARBERA, Ph.D., Professor of Romance Languages, Emeritus. A.B., Brooklyn College, 1947; A.M., University of Arizona, 1948; Doctor en Letras, Universidad Nacional de Mexico, 1949; Ph.D., University of Wisconsin, 1958. (1953-1981)

GEORGE A. BILLIAS, Ph. D., Professor of History, Emeritus. A.B., Bates College, 1948; M.A., Columbia University, 1949; Ph. D.,1958. (1962-1989)

JOHN J. BRINK, Ph.D., Professor of Biology; Adjunct Professor of Chemistry. B.Sc., University of Orange Free State, 1955; B.Sc. (Hons), University of Witwatersrand, 1956; Ph.D., University of Vermont, 1962. (1966-1995)

ROBERT F. CAMPBELL, Ph.D., Professor of American History, Emeritus. A.B., Yale University, 1939; A.M., Columbia University, 1940; Ph.D., 1947. (1946-1957; 1960-)

WILLIAM H. CARTER JR., Ph.D., Professor of English, Emeritus. A.B., Middlebury College, 1936; A.M., Harvard University, 1938; Ph.D., 1951. (1949-1984)

SAMUEL P. COWARDIN III, Ph.D., Associate Professor of Art History, Emeritus. A.B., Harvard University, 1943; A.M., 1948; Ph.D., 1963. (1949-86)

JESSIE C. CUNNINGHAM, Ph.D., Associate Professor of English, Emeritus. (1957-1975)

WESLEY M. FULLER, M.Mus., George N. and Selma U. Jeppson Professor of Music, Emeritus. B.Mus., Oberlin Conservatory,1953; M.Mus, Boston University, 1958. (1963-1990)

PETER P. GIL, Ph.D., Professor of Management, Emeritus. A.B., Harvard University, 1949; M.B.A., Harvard Business School, 1951; Ph.D., University of Geneva, 1963. (1981-1988)

HELEN J. KENNEY, Ed.D., Professor of Education, Emeritus. A.B., Emmanuel College, 1944; M.Ed., Boston College, 1953; Ed.D, Boston University, 1959. (1968-1990)

J. FANNIN KING, M.A., Associate Professor of Romance Languages, Emeritus. Adviser to International Students. A.B., Pomona College, 1936; A.M., Harvard University, 1937. (1946-1985)

DUANE S. KNOS, Ph.D., Professor of Geography, Emeritus. B.A., Upper Iowa College, 1947; M.A., University of Iowa, 1953; Ph.D., 1956. (1970-1987)

ROGER P. KOHIN, Ph.D., Associate Professor of Physics. B.S.E.E., University of Notre Dame, 1953; Ph.D., University of Maryland, 1961. (1962-1994)

DONALD W. KRUEGER, M.F.A., Associate Professor of Art. B.F.A., Kansas City Art Institute, 1950; M.F.A., 1952; M.S., Rhode Island School of Design, 1960. (1972-1994)

HAROLD T. MOODY, Ph.D., Associate Professor of Management. B.S., University of California, Los Angeles, 1959; M.B.A., 1960; Ph.D., 1964. (1969-1994)

HOWARD NICHOLSON, Ph.D., Professor of Economics, Emeritus. A.B., Oberlin College, 1942; M.A., Harvard University, 1948; Ph.D., 1953. (1958-1986)

J. RICHARD REID, Ph.D., Professor of Romance Languages, Emeritus. A.B., Swarthmore College, 1935; A.M., Harvard University, 1936; Ph.D. 1943. (1944-1976)

JOHN T. REYNOLDS, Ph.D., Professor of Microbiology. B.S., Boston College, 1951; M.S., University of Massachusetts, 1955; Ph.D., 1962; M.P.H., Harvard University, 1978. (1956-1995)

HARRY E. SCHWARZ, B.C.E., P.E., Professor of Environment, Technology and Society, Emeritus; Senior Scientist, George Perkins Marsh Institute, 1994-1997. B.C.E., George Washington University, 1954. (1973-1987)

JOHN S. STUBBE, Ph.D., Associate Professor of Mathematics, Emeritus. B.S., University of New Hampshire, 1941; M.S., Brown University, 1942; Ph.D., University of Cincinnati, 1945. (1949-1980)

THEODORE H. VON LAUE, Ph.D., Jacob and Frances Hiatt Professor of History, Emeritus. B.A., Princeton University, 1939; Ph.D., 1944. (1970-1983)

SEYMOUR WAPNER, Ph.D., Executive Committee, Heinz Werner Institute; G. Stanley Hall Professor of Genetic Psychology, Emeritus. A.B., New York University, 1939; A.M., University of Michigan, 1940; Ph.D., 1943. (1948-1988)

MORTON WIENER, Ph.D., Professor of Psychology, Emeritus. B.S., City College of New York, 1949; M.S.Ed., 1950; Ph.D., University of Rochester, 1953. (1957-1990)

FULL-TIME INSTRUCTIONAL FACULTY

Tenured, Tenure-line, and Long-term Visiting Appointments

(See individual departments for other appointments)

MARIA I. ACOSTA CRUZ, Ph.D., Associate Professor of Spanish. B.A., University of Puerto Rico, Mayaguez, 1978; M.A., State University of New York at Binghamton, 1980; Ph.D., 1984. (1986-)

CHARLES C. AGOSTA, Ph.D., Assistant Professor of Physics. B.A., Wesleyan University, 1980; Ph.D., Duke University, 1986. (1991-)

VERNON AHMADJIAN, Ph.D., Professor of Biology. A.B., Clark University, 1952; A.M., 1956; Ph.D., Harvard University, 1960. (1959-)

DAVID P. ANGEL, Ph.D., Associate Professor of Geography; Director, Graduate School of Geography. B.A., Cambridge University (England), 1980; M.A., University of California, Los Angeles, 1984; Ph.D., 1988. (1987-)

MICHIKO Y. AOKI, Ph.D., Assistant Professor of Japanese. A.M., Syracuse University, 1963; Ph.D., Columbia University, 1970. (1990-)

MARGARETE ARNDT, Ph.D., Assistant Professor of Management. M.B.A., Simmons College, 1982. (1990-)

SANDRA T. AZAR, Ph.D., Associate Professor of Psychology. B.A., Wheaton College, 1974; M.A., University of Rochester, 1982; Ph.D., 1984. (1986-)

SUBRAMANIAN BALACHANDER, Ph.D., Assistant Professor of Marketing. B. Tech, Indian Institute of Technology, Madras, 1979; P.G.D.M. (Post Graduate Degree in Management), Indian Institute of Management, Calcutta, 1983; M.S., Carnegie-Mellon University, 1988; Ph.D., 1991. (1992-)

MICHAEL BAMBERG, Ph.D., Associate Professor of Psychology. M.Phil., University of York, England, 1978; Ph.D., University of California, Berkeley, 1985. (1988-)

KENNETH J. BASYE, Ph.D., Assistant Professor of Mathematics and Computer Science. B.A. and B.S., the Evergreen State College, 1984; Sc.M., Brown University, 1989; Ph.D., 1993. (1992-)

DANA BENELLI, Ph.D., Assistant Professor of Screen Studies. B.A., Stanford University, 1970; B.A., The University of Washington, 1978; M.A., The University of Iowa, 1982; Ph.D. 1992. (1990-)

DANIEL M. BERNHOFEN, Ph.D., Assistant Professor of Economics. M.S. in Mathematics, Syracuse University, 1987; M.A. in Economics, 1991; Ph.D., 1994. (1994-)

THOMAS F. BERNINGHAUSEN, Ph.D., Assistant Professor of English. A.B., Oberlin College, 1979; Ph.D., State University of New York, Buffalo, 1988. (1989-)

PARMINDER K. BHACHU, Ph.D., Henry R. Luce Associate Professor of Cultural Identity and Global Processes. B.Sc., University College, London, 1976; Ph.D., London University, 1981. (1991-)

ROGER BIBACE, Ph.D., Professor of Psychology. A.B., University of British Columbia, 1949; Ph.D., Clark University, 1957. (1957-1994)

BARBARA BIGELOW, Ph.D., Associate Professor of Management. B.A., Cornell University, 1973; M.A., Simmons College, 1980; Ph.D., Sloan School of Management, Massachusetts Institute of Technology, 1987. (1989-)

S. LESLIE BLATT, Ph.D., Professor of Physics and Education; Chair, Department of Physics. A.B., Princeton University, 1957; M.S., Stanford University, 1959; Ph.D., 1965. (1987-)

CHARLES S. BLINDERMAN, Ph.D., Professor of English; Adjunct Professor of Biology. A.B., New York University, 1952; A.M., 1953; Ph.D., Indiana University, 1957. (1962-)

JOHN BLYDENBURGH, Ph.D., Professor of Government. B.A., Harpur College, 1965; Ph.D., University of Rochester, 1969. (1975-)

DANIEL R. BORG, Ph.D., Professor of History. A.B., Gustavus Adolphus College, 1953; A.M., Yale University, 1957; Ph.D., 1963. (1961-)

MARTYN J. BOWDEN, Ph.D., Professor of Geography; Adjunct Professor of Comparative Literature. B.A., London University, 1957; M.A., University of Nebraska, 1959; Ph.D., University of California, Berkeley, 1967. (1964-)

ROBERT C. BRADBURY, Ph.D., Associate Professor of Management. B.S., Holy Cross College, 1967; M.S. in Administration, George Washington University, 1971; M.S. in Preventive Medicine, Ohio State University, 1973; Ph.D., 1975. (1981-)

DAEG S. BRENNER, Ph.D., Professor of Chemistry; Adjunct Professor of Physics. B.S., Rensselaer Polytechnic Institute, 1960; Ph.D., Massachusetts Institute of Technology, 1964. (1967-)

HALINA S. BROWN, Ph.D., Associate Professor of Environment, Technology and Society; Director, Environment, Technology and Society Program. B.Sc., Washington University, 1971; Ph.D., New York University, 1975. (1985-)

JOHN C. BROWN, Ph.D., Associate Professor of Economics; Chair, Department of Economics. B.A., University of Wisconsin, 1978; M.A., University of Michigan, 1984; Ph.D., 1986. (1986-)

NANCY BUDWIG, Ph.D., Associate Professor of Psychology. B.A., Vassar College, 1979; Ph.D., University of California, Berkeley, 1986. (1988-)

SARAH D. BUIE, M.F.A., Associate Professor of Graphic Design. B.S., Wellesley College, 1971; M.F.A., Yale University, 1978. (1981-)

PAUL F. BURKE JR., Ph.D., Associate Professor of Classics; Adjunct Associate Professor of History. A.B., Stanford University, 1965; Ph.D., 1971. (1976-)

MARCIA BUTZEL, Ph.D., Associate Professor of French; Co-director, Women's Studies Program. B.A., Bryn Mawr College, 1975; M.A., University of Iowa, 1977; Ph.D., 1984. (1984-)

GERALD R. CASTONGUAY, Ph.D., Associate Professor of Music; Director, Music Program; Chair, Department of Visual and Performing Arts. B.Mus., Boston University, 1959; M.Mus., Hartt College of Music, 1963; M.A., Harvard University, 1965; Ph.D., Rutgers University, 1975. (1970-)

GARY N. CHAISON, Ph.D., Professor of Management. B.B.A., Baruch College, 1966; M.B.A., 1967; Ph.D., State University of New York at Buffalo, 1972. (1981-)

ARTHUR CHOU, Ph.D., Associate Professor of Mathematics. B.Sc., Tunghai University, Taiwan, 1976; Ph.D., State University of New York at Stony Brook, 1982. (1982-)

LEONARD E. CIRILLO, Ph.D., Associate Professor of Psychology. B.A., City College of New York, 1958; M.A., Clark University, 1962; Ph.D., 1965. (1968-)

JOHN J. CONRON, Ph.D., Associate Professor of English; Adjunct Associate Professor of Comparative Literature; Adjunct Associate Professor of Art History and Criticism. A.B., Brown University, 1961; M.A., University of Michigan, 1966; Ph.D., 1970. (1977-)

BRIAN J. COOK, Ph.D., Associate Professor of Government; Chair, Department of Government and International Relations. B.A., Cleveland State University, 1977; M.A., University of Maryland, 1982; Ph.D., 1984. (1984-)

JOSEPH C. CURTIS, Ph.D., Professor of Biology. B.A., Cornell University, 1951; Ph.D., Brown University, 1960. (1963-)

JOHN S. DAVIES, Ph.D., Associate Professor of Physics. B.S., University of Maryland, 1953; M.S., 1954; Ph.D., 1960. (1963-)

JUDITH W. DECEW, Ph.D., Associate Professor of Philosophy. B.A., University of Rochester; M.A., University of Massachusetts-Amherst; Ph.D., 1978. (1987-)

JOSEPH deRIVERA, Ph.D., Professor of Psychology. B.A., Yale University, 1953; Ph.D., Stanford University, 1961. (1970-)

PATRICK G. DERR, Ph.D., Associate Professor of Philosophy; Chair, Department of Philosophy. B.A., Seattle University, 1972; Ph.D., University of Notre Dame, 1976. (1976-)

SARAH J. DEUTSCH, Ph.D., Associate Professor of History. B.A., Yale University, 1977; M.Litt., Oxford University, 1980; Ph.D., Yale University, 1985. (1989-)

DILEEP G. DHAVALE, Ph.D., Associate Professor of Management. B.S., Indian Institute of Technology, Bombay, 1969; M.S., State University of New York, Buffalo, 1972; Ph.D., The Pennsylvania State University, 1975. (1987-)

DAVID K. DICKINSON, Ed.D., Associate Professor of Education. B.A., Oberlin College, 1971; Ed.M., Temple University, 1976; Ed.D., Harvard University, 1982. (1988-)

CAROL C. D'LUGO, Ph.D., Associate Professor of Spanish. B.A., Douglass College, 1965; M.A., University of Illinois, 1967; Ph.D., Brown University, 1983. (1984-)

MARVIN A. D'LUGO, Ph.D., Professor of Spanish; Adjunct Professor of Screen Studies; Director, Screen Studies Program. B.A., Brooklyn College, 1965; M.A., University of Illinois, 1967; Ph.D., 1969. (1972-)

LINDA J. DUSMAN, D.M.A., Associate Professor of Music. B.Mus., The American University, 1978; M.A., 1981; D.M.A., The University of Maryland, 1988. (1988-)

J. RONALD EASTMAN, Ph.D., Professor of Geography. B.A., Bishop's University, 1971; M.A., Queen's University, Ontario, 1977; Ph.D., Boston University, 1982. (1981-)

JAMES P. ELLIOTT, Ph.D., Associate Professor of English; Adjunct Associate Professor of Screen Studies. B.A., Stanford University, 1966; Ph.D., Indiana University, 1971. (1971-)

PRISCILLA ELSASS, Ph.D., Assistant Professor of Management. B.S., Cornell University, 1975; M.P.S., 1976; M.B.A., The University of Connecticut, Storrs, 1989; Ph.D., 1992. (1991-)

JACQUE L. EMEL, Ph.D., Associate Professor of Geography. B.A., University of Kansas, 1972; M.S., Pennsylvania State University, 1977; Ph.D., University of Arizona, 1983. (1984-)

CYNTHIA ENLOE, Ph.D., Professor of Government and International Relations. B.A., Connecticut College, 1960; M.A., University of California, Berkeley, 1963; Ph.D., 1967. (1972-)

KAREN L. ERICKSON, Ph.D., Professor of Chemistry. B.S., Siena Heights College, 1960; Ph.D., Purdue University, 1964. (1965-)

PATRICIA M. EWICK, Ph.D., Assistant Professor of Sociology. B.A., Tufts University, 1976; M.A., Yale University, 1977; M.Phil., 1978; Ph.D., 1985. (1990-)

RACHEL JOFFE FALMAGNE, Ph.D., Professor of Psychology; Licence in Psychological Sciences, University of Brussels, 1961; Docteur en Sciences Psychologiques, 1967. (1973-)

JAMES P. FERDERER, Ph.D., Assistant Professor of Economics. B.A., The College of St. Thomas, 1983; M.A., Washington University, 1985; Ph.D., 1988. (1988-)

WILLIAM R. FERGUSON, Ph.D., Associate Professor of Spanish; Adjunct Associate Professor of English; Chair, Department of Foreign Languages and Literature. A.B., Harvard College, 1965; A.M., Harvard University, 1970; Ph.D., 1975. (1979-)

SUSAN A. FOSTER, Ph.D., Assistant Professor of Biology. B.A., University of Wisconsin, 1974; Ph.D. University of Washington, 1984. (1995-)

RICHARD B. FORD, Ph.D., Professor of History; Co-director, International Development and Social Change Program. B.A., Denison University, 1957; M.A.T., Yale University, 1959; Ph.D., University of Denver, 1966. (1968-)

EVERETT FOX, Ph.D., Associate Professor of Jewish Studies; Director, Jewish Studies Program. B.A., Brandeis University, 1968; M.A., 1972; Ph.D., 1975. (1987-)

JAMES P. GEE, Ph.D., Professor of Education, B.A., University of California, Santa Barbara, 1970; M.A., Stanford University, 1974; Ph.D., 1975. (1993-)

SUNHEE KIM GERTZ, Ph.D., Associate Professor of English. B.A., Carnegie-Mellon University, 1973; M.A., State University of New York, Binghamton, 1977; Ph.D., University of Chicago, 1983. (1985-)

JOSEPH H. GOLEC, Ph.D., Associate Professor of Management. B.A., Trinity College, 1980; M.A., Washington University, 1982; Ph.D., 1986. (1986-)

HARVEY A. GOULD, Ph.D., Professor of Physics; Acting Chair, Department of Physics. B.A., University of California, Berkeley, 1960; Ph.D., 1966. (1971-)

BONNIE LEE GRAD, Ph.D., Associate Professor of Art History. B.A., Cornell University, 1971; Ph.D., University of Virginia, 1977. (1977-)

LAURA M. GRAVES, Ph.D., Assistant Professor of Management. B.A., College of William and Mary, 1977; M.A., University of Connecticut, 1980; Ph.D., 1982. (1989-)

WAYNE B. GRAY, Ph.D., Associate Professor of Economics. A.B., Dartmouth College, 1977; M.A., Harvard University, 1979; Ph.D., 1983. (1984-)

FREDERICK GREEN, Ph.D., Associate Professor of Mathematics and Computer Science. B.S., Rensselaer Polytechnic Institute, 1973; M.S., Worcester Polytechnic Institute, 1979; Ph.D., Yale University, 1986. (1986-)

FREDERICK T. GREENAWAY, Ph.D., Professor of Chemistry; Adjunct Professor of Biology. B.Sc., University of Canterbury, New Zealand, 1969; Ph.D., 1973. (1980-)

JANETTE T. GREENWOOD, Ph.D., Assistant Professor of History. A.B., Kenyon College, 1977; M.A., University of Wisconsin, Madison, 1978; Ph.D., University of Virginia, 1991. (1991-)

BEVERLY C. GRIER, Ph.D., Associate Professor of Government. M.A., Yale University, 1975; Ph.D., 1979. (1986-)

SHARON A. GRIFFIN, Ph.D., Assistant Professor of Education; Adjunct Assistant Professor of Psychology. B.A., McGill University, 1965; M.Ed., University of New Hampshire, 1970; Ph.D., University of Toronto, 1988. (1989-)

WENDY S. GROLNICK, Ph.D., Assistant Professor of Psychology. B.A., Cornell University, 1981; M.A., University of Rochester, 1984; Ph.D., 1987. (1991-)

SUSAN E. HANSON, Ph.D., Professor of Geography. A.B., Middlebury College, 1964; M.S., Northwestern University, 1969; Ph.D., 1973. (1981-)

STANLEY R. HERWITZ, Ph.D., Associate Professor of Geography. B.A., New College of the University of South Florida, 1977; M.A., University of California, Berkeley, 1979; Ph.D., Australian National University, Canberra, 1983. (1984-)

SERENA S. HILSINGER, Ph.D., Professor of English; Chair, Department of English. B.A., Douglass College, Rutgers University, 1959; Ph.D., University of Connecticut, 1964. (1962-)

CHRISTOPH HOHENEMSER, Ph.D., Professor of Physics and Environment, Technology, and Society; B.A., Swarthmore College, 1958; Ph.D., Washington University, St. Louis, 1963. (1971-)

ROBERT C. HSU, Ph.D., Professor of Economics. B.A., National Taiwan University, 1960; M.A., Atlanta University, 1963; Ph.D., University of California, Berkeley, 1970. (1971-)

KENNETH HUGHES, Ph.D., Professor of German and Russian; Adjunct Professor of Theater Arts. A.B., Rutgers College, 1962; Ph.D., Rutgers University, 1967. (1973-)

H. WILLIAM JOHANSEN, Ph.D., Professor of Biology. B.A., San Jose State College, 1955; M.A., San Francisco State College, 1961; Ph.D., University of California, Berkeley, 1966. (1968-)

DOUGLAS L. JOHNSON, Ph.D., Associate Professor of Geography. B.A., Clark University, 1965; M.A., University of Chicago, 1968; Ph.D., 1971. (1973-)

FERN L. JOHNSON, Ph.D., Professor of English. B.A., University of Minnesota, 1968; M.A., Northwestern University, 1969; Ph.D., University of Minnesota, 1974. (1988-)

ALAN A. JONES, Ph.D., Professor of Chemistry; Adjunct Professor of Physics. B.A., Colgate University, 1966; Ph.D., University of Wisconsin, 1972. (1974-)

DAVID E. JOYCE, Ph.D., Associate Professor of Mathematics. B.S., University of Michigan, 1973; M.A., University of Pennsylvania, 1975; Ph.D., 1979. (1979-)

HARTMUT M. KAISER, Ph.D., Associate Professor of German; Adjunct Associate Professor of Music. B.A., Abendgymnasium, Hamburg, Germany, 1957; Ph.D., Brown University, 1968. (1971-)

BERNARD KAPLAN, Ph.D., Professor of Psychology; Adjunct Professor of Philosophy, Adjunct Professor of Comparative Literature. A.B., Brooklyn College, 1948; A.M., Clark University, 1950; Ph.D. 1953.(1953-)

GERALD J. KARASKA, Ph.D., Professor of Geography. B.S., Pennsylvania State University, 1954;

M.A., George Washington University, 1957; Ph.D., Pennsylvania State University,1962. (1969-)

ROGER E. KASPERSON, Ph.D., Professor of Government and Geography; Provost and Vice President for Academic Affairs. A.B., Clark University, 1959; M.A., University of Chicago, 1961; Ph.D., 1966. (1968-)

DOROTHY KAUFMANN, Ph.D., Associate Professor of French. B.A., University of Rochester, 1959; M.A., New York University, 1960; Ph.D., Columbia University, 1967. (1975-)

LINDA M. KENNEDY, Ph.D., Associate Professor of Biology; Adjunct Associate Professor of Psychology; A.B., Simmons College, 1975; R.N., Ph.D., Harvard University, 1979. (1983-)

JOHN F. KENNISON, Ph.D., Professor of Mathematics. B.S., Queens College, 1959; A.M., Harvard University, 1960; Ph.D., 1963. (1963-)

BRADLEY S. KLEIN, Ph.D., Assistant Professor of Government. B.A., SUNY-Binghamton, 1976; M.A., University of Massachusetts-Amherst, 1984; Ph.D., 1984. (1995-)

WILLIAM A. KOELSCH, Ph.D., Professor of Geography and History. Sc.B., Bucknell University, 1955; A.M., Clark University, 1959; Ph.D., University of Chicago, 1966. (1963; 1967-)

SHARON KREFETZ, Ph.D., Associate Professor of Government and International Relations; Dean of the College. A.B., Douglass College, 1967; M.A., Brandeis University, 1970; Ph.D., 1975. (1972-)

JAMES D. LAIRD, Ph.D., Professor of Psychology; Chair, Department of Psychology. B.A., Middlebury College, 1962; Ph.D., University of Rochester, 1966. (1966-)

CHRISTOPHER P. LANDEE, Ph.D., Professor of Physics; Adjunct Professor of Chemistry. A.B., Kalamazoo College, 1967; M.S., University of Michigan, 1968; Ph.D., 1975. (1980-)

THOMAS J. LEONARD, Ph.D., Professor of Biology; Chair, Department of Biology. B.A., Clark University, 1962; Ph.D., Indiana University, 1967. (1994-)

CATHERINE M. LEVESQUE, Ph.D., Associate Professor of Art History. B.A., Barnard College, 1977; M.A., Columbia University, 1979; M.Phil., 1981; Ph.D., 1987. (1986)

LAURENCE A. LEWIS, Ph.D., Professor of Geography. B.A., Antioch College, 1961; M.S., Northwestern University, 1963; Ph.D., 1964. (1970-)

DOUGLAS J. LITTLE, Ph.D., Associate Professor of History. B.A., University of Wisconsin, 1972; M.A., Cornell University, 1975; Ph.D., 1978. (1978-)

TODD P. LIVDAHL, Ph.D., Associate Professor of Biology. B.A., St. Olaf College, 1973; Ph.D., University of North Carolina, 1978. (1980-)

BRUCE LONDON, Ph.D., Professor of Sociology. B.A., Bates College, 1968; M.A., University of Connecticut, Storrs, 1973; Ph.D. 1977. (1990-)

PAUL LUCAS, Ph.D., Associate Professor of History. B.A., Brandeis University, 1955; M.A., Princeton University, 1957; Ph.D., 1963. (1969-)

TIMOTHY A. LYERLA, Ph.D., Professor of Biology Adjunct Professor of Chemistry. B.S., University of California, 1963; M.A., San Diego State College, 1967; Ph.D., Pennsylvania State University, 1970. (1971-)

DREW R. McCOY, Ph.D., Jacob and Francis Hiatt Professor of History; Chair, Department of History. A.B., Cornell University, 1971; M.A., University of Virginia, 1973; Ph.D., 1976. (1990-)

JAMES P. McHALE, Ph.D., Assistant Professor of Psychology. A.B., University of South Florida, 1981; M.S., Tulane University, 1985; Ph.D., University of California, Berkeley, 1992. (1994-)

DEBORAH M. MERRILL, Ph.D., Assistant Professor of Sociology. B.A., Bowdoin College, 1984; M.A., Brown University, 1988; Ph.D., 1991. (1992-)

SARAH MICHAELS, Ph.D., Associate Professor of Education; Director of The Jacob Hiatt Center for Urban Education. Chair, Department of Education. B.A., Barnard College, 1975; M.A., University of California, Berkeley, 1976; Ph.D.,1981. (1991-)

DALE F. MIERKE, Ph.D., Assistant Professor of Chemistry. B.Sci., University of California, Irvine, 1984; M.Sci., University of California, San Diego, 1986; Ph.D., 1988. (1993-)

MARK C. MILLER, Ph.D., Assistant Professor of Government and International Relations. B.A., Ohio Northern University, 1980; J.D., George Washington University, 1983; M.A., Ohio State University, 1989; Ph.D., 1990. (1990-)

ROBERT C. MITCHELL, Ph.D., Professor of Geography. B.A., The College of Wooster, Ohio, 1957; M.Div., Union Theological Seminary, 1960; M.A., Northwestern University, 1965; Ph.D., 1970. (1987-)

LAWRENCE E. MORRIS, Ph.D., Professor of Mathematics. B.S., University of Sydney, 1969; M.S., 1971; Ph.D., Cambridge University, 1975. (1979-)

RAYMOND J. MUNRO, M.A.H., Associate Professor of Theater Arts. B.A., Columbia College, 1973; M.A.H. in Theater, State University of New York, Buffalo, 1977. (1979-)

WINSTON NAPIER, Ph.D., E. Franklin Frazier Assistant Professor of English. B.A., The William Paterson College of New Jersey, 1974; M.A., Howard University, 1978; Ph.D., 1991. (1995-)

DONALD J. NELSON, Ph.D., Professor of Chemistry; Adjunct Professor of Biology; Chair, Gustaf H. Carlson School of Chemistry. B.S., Rutgers University, 1967; Ph.D., University of North Carolina, 1972. (1975-)

ATTIAT F. OTT, Ph.D., Professor of Economics; Director of the Institute for Economic Studies. B.A., Cairo University, 1956; Ph.D., University of Michigan, 1962. (1969-)

EDWARD J. OTTENSMEYER, Ph.D., Associate Professor of Management; Acting Co-Dean, Graduate School of Management. B.A., Marian College; M.B.A., Indiana University; Ph.D., 1982. (1986-)

GARY E. OVERVOLD, Ph.D., Associate Professor of Philosophy. A.B., St. Olaf College, 1962; Ph.D., Claremont Graduate School, 1965. (1969-)

MICHAEL PAKALUK, Ph.D., Associate Professor of Philosophy. A.B., Harvard College, 1980; M.Litt, University of Edinburgh, 1982; Ph.D., Harvard University, 1988. (1988-)

RICHARD PEET, Ph.D., Professor of Geography. B.Sc., University of London, 1961; M.A., University of British Columbia, 1963; Ph.D., University of California, Berkeley, 1968. (1967-)

FRANK W. PUFFER, Ph.D., Professor of Economics. B.S., Brown University, 1960; Ph.D., 1965. (1968-)

RONALD K. RICHARDSON, Ph.D., Associate Professor of History. B.A., State University of New York, Binghamton, 1973; M.A., 1975; Ph.D., 1983. (1989-)

DIANNE E. ROCHELEAU, Ph.D., Assistant Professor of Geography. B.A., University of South Florida, Tampa, 1973; M.A., 1976; Ph.D., University of Florida, Gainesville, 1983. (1989-)

PAUL S. ROPP, Ph.D., Professor of History. B.A., Bluffton College, 1966; M.A., University of Michigan, 1968; Ph.D., 1974. (1984-)

ROBERT J. S. ROSS, Ph.D., Professor of Sociology. B.A., University of Michigan, 1963; M.A., University of Chicago, 1966; Ph.D., 1975. (1972-)

LEE RUDOLPH, Ph.D., Associate Professor of Mathematics and Computer Science; Chair, Department of Mathematics and Computer Science. A.B., Princeton University, 1969; Ph.D., Massachusetts Institute of Technology, 1974. (1986-)

WALTER SCHATZBERG, Ph.D., Professor of German; Adjunct Professor of Screen Studies; Director, Clark European Center in Luxembourg. B.A., St. John's College, Maryland, 1954; M.A., Johns Hopkins University, 1957; Ph.D., 1966. (1966-)

NEIL R. SCHROEDER, Ph.D., Associate Professor of Theater Arts. A.B., Brown University, 1952; Ph.D., Yale University, 1962. (1960-)

ZENOVIA A. SOCHOR, Ph.D., Associate Professor of Government and International Relations. B.A., University of Pennsylvania, 1965; M.S., London School of Economics, 1966; Ph.D., Columbia University, 1977. (1980-)

CHRISTINA SOMMERS, Ph.D., Associate Professor of Philosophy. B.A., New York University, 1973; Ph.D., Brandeis University, 1979. (1980-)

MICHAEL K. SPINGLER, Ph.D., Associate Professor of French; Adjunct Associate Professor of Screen Studies. B.A., Dartmouth College, 1959;

M.A., University of Pittsburgh, 1961; Ph.D., 1966. (1972-)

NATALIA STERNBERG, Ph.D., Associate Professor of Mathematics and Computer Science. M.Sc., University of Cologne, West Germany, 1979; M.Sc., Brown University, 1982; Ph.D., 1985. (1987-)

DAVID A. STEVENS, Ph.D., Professor of Psychology. A.B., University of California, Berkeley, 1954; M.A., University of Oregon, 1963; Ph.D., 1965. (1965-)

HENRY J. STEWARD, Ph.D., Associate Professor of Geography. B.Sc., University of London, 1962; Ph.D., University of Wales (Swansea), 1972. (1978-)

STANLEY SULTAN, Ph.D., Professor of English. A.B., Cornell University, 1949; A.M., Boston University, 1950; Ph.D., Yale University, 1955. (1959-)

R.P. SUNDARRAJ, Ph.D., Assistant Professor of Management. B.S., University of Madras, India; M.S., University of Tennessee, Knoxville; Ph.D., 1990. (1989-)

MAURRY TAMARKIN, Ph.D., Associate Professor of Management; Acting Co-Dean, Graduate School of Management. A.B., Washington University, 1961; Ph.D., 1979. (1981-)

SHELLY TENENBAUM, Ph.D., Associate Professor of Sociology; Adjunct Associate Professor of Jewish Studies; Acting Chair, Department of Sociology. B.A., Antioch University, 1977; Ph.D., Brandeis University, 1986. (1986-)

BARBARA P. THOMAS-SLAYTER, Ph.D., Associate Professor of International Development; Adjunct Associate Professor of Government; Co-director, International Development and Social Change Program. B.A., Bryn Mawr College, 1958; M.Ed., Harvard Graduate School of Education, 1968; Ph.D., Brandeis University, 1981. (1980-)

NICHOLAS S. THOMPSON, Ph.D., Professor of Psychology and Ethology. B.A., University of California, Berkeley, 1961; Ph.D., 1966. (1970-)

DAVID THURLOW, Ph.D., Associate Professor of Chemistry; Director, Biochemistry and Molecular Biology Program. B.A., Bowdoin College, 1971; M.S., University of Maine, Orono, 1974; Ph.D., University of Massachusetts, Amherst, 1981. (1985-)

RHYS F. TOWNSEND, Ph.D., Associate Professor of Art History. B.A., University of North Carolina, 1974; Ph.D., 1982. (1982-)

EDWARD N. TRACHTENBERG, Ph.D., Professor of Chemistry; Coordinator of Professional Placement. A.B., New York University, 1949; A.M., Harvard University, 1951; Ph.D., 1953. (1958-)

MARK M. TURNBULL, Ph.D., Associate Professor of Chemistry. B.S., University of New Hampshire, 1978; M.S., 1984; Ph.D., Brandeis University, 1986. (1986-)

B.L. TURNER II, Ph.D., Professor of Geography; Director, George Perkins Marsh Institute. B.A., University of Texas, 1968; M.A., 1969; Ph.D., University of Wisconsin, 1974. (1979-)

ROBERT A. ULLRICH, Ph.D., Professor of Management. B.S., United States Merchant Marine Academy, 1960; M.B.A., Tulane University, 1964; Ph.D., Washington University, 1968. (1988-)

INA C. UZGIRIS, Ph.D., Professor of Psychology. B.S., University of Illinois, 1957; M.A., 1960; Ph.D., 1962. (1966-)

ROGER C. VAN TASSEL, Ph.D., Professor of Economics. A.B., Union College, 1947; A.M., Cornell University, 1950; Ph.D., Brown University, 1956. (1954-)

VIRGINIA M. VAUGHAN, Ph.D., Professor of English; B.A. University of Michigan, 1968; M.A., 1970; Ph.D., 1972. (1976-)

EMIEL C. VEENDORP, Ph.D., Professor of Economics. B.A., University of Groningen, 1960; Ph.D., Rice University, 1963. (1976-)

DAVID F. VENTURO, Ph.D., Assistant Professor of English. A.B., Rutgers College, 1977; A.M., Harvard University, 1981; Ph.D., 1986. (1989-)

ROBERT VITALIS, Ph.D., Assistant Professor of Government. B.A., State University of New York, Stony Brook, 1978; S.M., Massachusetts Institute of Technology, 1984; Ph.D., 1989. (1991-)

MARTINE VOIRET, Ph.D., Assistant Professor of French. B.A., Université d'Amiens, 1978; M.A., Duke University, 1982; M.A., The Johns Hopkins University, 1986; Ph.D., 1990. (1989-)

MAURICE D. WEINROBE, Ph.D., Professor of Economics;. B.S., Bradley University, 1964; Ph.D., Cornell University, 1969. (1976-)

WEN-YANG WEN, Ph.D., Professor of Chemistry. B.S., National Taiwan University, 1953; Ph.D., University of Pittsburgh, 1958. (1962-)

MARIANNE WISER, Ph.D., Associate Professor of Psychology. Engineer in Physics, 1972; Bachelor in Oceanography, University of Leige, Belgium, 1973; Ph.D., Massachusetts Institute of Technology, 1981. (1981-)

WALTER E. WRIGHT, Ph.D., Associate Professor of Philosophy. B.A., Yale University, 1965; M.A., Vanderbilt University, 1967; Ph.D., 1971. (1968-)

DAVID ZERN, Ph.D., Associate Professor of Education; Adjunct Associate Professor of Psychology. B.A., Harvard University, 1962; Ed.M., 1964; Ph.D., 1969. (1971-)

The Corporation

As of July 1, 1995

OFFICERS

Melvin M. Rosenblatt, B.B.A.,
Worcester, MA

John L. Foley, B.A., assistant secretary,
Worcester, MA

James E. Collins, M.B.A.,treasurer,
Shrewsbury, MA

Albert A. LePage, B.S.B.A., assistant
treasurer, Auburn, MA

LIFE MEMBERS

Jacob Hiatt, A.M., Worcester, MA

Alice C. Higgins, L.H.D., Worcester, MA

Richard W. Mirick, LL.B., Princeton, MA

Sumner B. Tilton Jr., J.D., Worcester, MA

TERM MEMBERS

Norman B. Asher, LL.B., Auburndale, MA

Elizabeth Cohen, Ph.D., Stanford, CA

Steve C. Dune, J.D., New York, NY

Michael I. Freedman, B.A., New York, NY

Allen M. Glick, B.S.B.A., Framingham, MA

James H. Harrington, B.A., Worcester, MA

Robert J. Hurst, M.B.A., New York, NY

Lydia Pastuszek, B.A., Newton, MA

Perry R. Pero, M.B.A., Oak Park, IL

Edgenie H. Rice, A.B., New York, NY

Barry K. Rogstad, M.A., Potomac, MD

Melvin M. Rosenblatt, B.B.A., Worcester, MA

Ronald M. Shaich, M.B.A., Cambridge, MA

John J. Shields, Prides Crossing, MA

Morton H. Sigel, B.B.A., Northborough, MA

Sherwood T. Small, M.B.A., New London, NH

Anthony F. Stepanski, B.A., Westfield, NJ

Ronald A. Walter, M.A., Memphis, TN

ALUMNI MEMBERS

Thomas J. Anton, Ph.D., Providence, RI

Bonnie F. Carter, B.A., Wynnewood, PA

Elaine Cinelli, B.A., Chatham, NJ

Stephen E. Brodsky, B.B.A., Boca Raton, FL

Eleanor S. Erickson, B.A, Lexington, MA

Jacqueline R. Morrow, J.D., Pittsburgh, PA

HONORARY MEMBERS

Fairman C. Cowan, LL.B., Worcester, MA

George D. DeRado, B.B.A., Montecito, CA

Roland A. Erickson, M.A., Naples, FL

John Jeppson, M.B.A., Worcester, MA

Robert K. Massey, LL.D., Jaffrey, NH

Stephen T. Riley, Ph.D., Weston, MA

Edward A. Smith, J.D., Kansas City, MO

Academic — CALENDAR 1995-1996

■ FALL SEMESTER 1995

August 23	New international and early arrival students' arrive
August 25	Start of Orientation for new students Residences open for new students
August 27	Residence Halls open at 9 am for returning students Orientation for new graduate students
August 28	Registration for continuing undergraduate students
August 29	First day of Classes (on a Monday class schedule)
	Fall Convocation
September 1	Graduate registration forms due at departments
September 4	Labor Day (no classes)
September 5	Graduate registration forms due at Grad School Office
September 15	Last day to add course without petition; Last day to drop course without W
October 6-8	Parent's Weekend Environmental School inauguration
October 9	University Fall Open House
October 14	Midterm break begins (after last class on Friday, Oct. 13)
October 18	Classes resume
November 6	Preregistration for Spring 1996 begins
November 10	University Open House
November 17	Preregistration for Spring 1996 ends
November 21	Thanksgiving recess begins after last class

webcom & ~~Ltd.~~ Limited

Adshead Graphics

■ SPRING SEMESTER 1996

January 14	Residence Halls/Houses open at 9 am
January 15	Registration for undergraduate students University Day Program at 4 pm, Atwood Hall
January 16	First day of classes
January 19	Graduate registration forms due at departments
January 22	Graduate registration forms due at Grad School Office
February 1	Last day to add course without petition Last day to drop course without W
March 8	Spring recess begins after last class
March 18	Classes resume
April 8	Preregistration for fall 1996 begins
April 19	Preregistration for fall 1996 ends
April 29	Last day of classes Last day to withdraw from course in Undergraduate College
April 30	Reading days begin
May 1	Reading days end
May 2	Final examinations begin
May 8	Final examinations end
May 9	Residence Halls/Houses close for non-graduating students
May 19	Commencement
May 20	Residence Halls/Houses close at noon for degree recipients

CLARK UNIVERSITY
950 Main Street Worcester, Massachusetts 01610-1477

Bound Printed Matter BLK RT
U.S. Postage
PAID
Worcester, MA
Permit 1886